

# CUTTING

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For Human Use under 1/- and 2/4, and

## ELLIMAN'S ROYAL EMBROCATION

For Horses, Cattle, and Dogs under 1/9, 2/2, and 3/-,

can only be done by signing an agreement **not to do so** and then **breaking faith**, as all Wholesalers are pledged to secure agreements from every purchaser **not to sell retail** under the above prices.



We invite reports of all cases of cutting under the minimum prices, but the statements must be supported by evidence—viz., a receipted bill; when we will advise all the Wholesale Houses of the address of the dealer implicated, in order that his supplies may be cut off. Quotations in Retail Lists are not a certain guide to present prices, as many have fallen in with our arrangements since the lists were printed, and quotations in those lists cannot be accepted as evidence of

# CUTTING.

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## SELL SYMINGTON'S "EDINBURGH" COFFEE ESSENCES,

which are prepared (under the personal superintendence of those possessing the necessary chemical and technical knowledge) from the Best raw materials, selected, roasted, and ground at our own Works.

Always good alike—Pure—Cheap—Quite clear—No trouble—No waste.

**THOMAS SYMINGTON & CO., EDINBURGH AND LONDON.**

*If you do no business in our Goods, kindly show this to some friend who does.*

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Have been Awarded the following Specialties of

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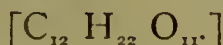
For Purity and Excellence of Quality:—

Essence of Pure Coffee	...	...	...	...	In 6d., 1s., and 2s. Bottles.
Do. Coffee and Chicory	...	...	...	...	In do. do.
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Prepared Taraxacum (Dandelion)	...	...	...	...	In $\frac{1}{4}$ and $\frac{1}{2}$ lb. Tins.
Do. do. with Pure Coffee	...	...	...	...	In do. do.
"Pyramid" Malt Extract	...	...	...	...	In 8-oz. (fluid) Bottles.
Do. do. with Cod Liver Oil	...	...	...	...	In do. do.

**THOS. SYMINGTON & CO., 61 LEADENHALL ST., E.C.**

HEAD OFFICE AND WORKS—BEAVERBANK, EDINBURGH.

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(ITHURIEL BRAND.)

*Specially Refined for Pharmaceutical use.*

It is necessary to be extremely careful in the selection of Sugar for Medicinal Syrups. Much of the Lump sugar of commerce contains Lime Salts and Silica, and is "blued" with Ultramarine.

Syrup made from such sugar is totally unfit for use with our CONCENTRATED LIQUORS. The presence of Ultramarine is especially objectionable, since, being a Sulphur compound, it is decomposed on the addition of an acid, Sulphuretted Hydrogen being liberated and Sulphur set free.

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It is *par excellence* the sugar for all Pharmaceutical purposes.

SYRUPUS B.P. To prepare the official Syrup it is simply necessary to place in a jar or other suitable vessel, (say) two pints of *cold* distilled water, and (say) five pounds of Pure Cane Sugar (*Ithuriel Brand*). After a few minutes' stirring, perfect solution is effected, and a brilliant neutral Syrup obtained, *requiring no straining or filtration*.

Syrup prepared as above should always be used with FLETCHERS' CONCENTRATED LIQUORS.

*Supplied in 7-lb., 14-lb., and 28-lb. Tins (free), at 6d. per lb., or in 1 cwt. Kegs (included) at 45s.*

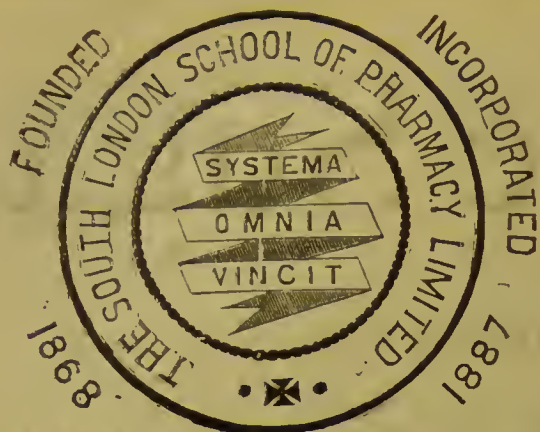
*Special Quotations for quantities of 5 cwt. and upwards.*

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For syllabus, &c., apply by letter addressed to the Secretary.

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MR. GEO. CLAYTON.

At the Examinations this month one Student entered for the MAJOR, and passed, viz:—

MR. H. HAZLITT, Bury.

And, so far, all the MINORS sent in have passed, viz:—

MR. J. FROWDE, Douglas, I.O.M.

„ R. DALTON, Wilmslow.

„ IIBSON, Carnforth.

MR. JOHNSON, Macclesfield.

„ BAMPFORD, Rochdale.

„ HOLFORD, Godley.

Six of the above passing at their first attempt.

Day, Afternoon, and Evening Classes for both Minor and Major are running.

The next Session commences on January 5th, 1891.

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*Now Ready, Second Edition, Crown 8vo., price 5s.*

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Including SPERMATORRHOEA, PROSTATORRHOEA, IMPOTENCE and STERILITY in Both Sexes.

**By M. K. HARGREAVES, M.D.**

*Assistant Physician to St. John's Hospital for Diseases of the Skin.*

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## LONDON HOMŒOPATHIC HOSPITAL AND MEDICAL SCHOOL, GREAT ORMOND STREET, BLOOMSBURY, W.C.

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G. A. CROSS Secretary-Superintendent.

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Preliminary (3 months) — ..	.. ..	2 12 6

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*N.B.—See Advertisement in Diary, 1891.*

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A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

# The Chemist and Druggist

## SUPPLEMENT

Businesses Wanted.  
Businesses for Disposal.  
Premises to Let.  
Auction Sales.

SATURDAY, NOV. 1, 1890.

Partnerships.  
Situations Vacant.  
Situations Wanted.  
Miscellaneous.

### IMPORTANT.

"THE CHEMIST AND DRUGGIST" SUPPLEMENT, to be published on Saturday next, Nov. 8th, will have a bona-fide Circulation of not less than **12,650 COPIES**. Chemists desirous of purchasing or disposing of a Business, or in want of Assistants, or Assistants requiring Situations, should take advantage of this opportunity, as the circulation of this medium is the largest of any in the Drug Trade. Copy of Advertisement, with remittance, should be sent by Thursday, Nov. 6th, but we can take advertisements by First Post on Friday morning.

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## MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

### CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

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8.—NORTH DEVON.—Country town; good-class Dispensing and Retail Business; returns £450 yearly, increasing; satisfactory reasons for selling; opposition slight; rent £20; price £300.

9.—KENT.—Good-class Retail and Dispensing, situate in a large town; commanding shop; returns £700 yearly; good house; rent easy; held on lease. Price £500.

10.—KENT.—Large town.—Old-established Business, held by the vendor between nine and ten years; returns between £800 and £900 yearly; large sale for own proprietary articles; good house, private entrance, garden, &c.; price about £750.

11.—SEASIDE (South).—Favourite watering-place.—Handsome Pharmacy; well situate for business; returns about £1,600 yearly; very profitable; to an immediate purchaser special advantages will be offered, vendor having purchased London business; about £1,600 required.

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14.—SOUTH COAST.—Winter resort.—Handsome corner shop; good-class Dispensing and Retail; returns between £1,300 and £1,400 yearly; particulars on application; about £1,100 required.

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**PARTNERSHIP** for disposal (senior retiring); Petroleum, Ethers, Drug-grinding, &c.; entirely in English hands; situated in healthy, rapidly-rising large town in South Europe, where there is great scope for products; applicants should be willing and able to undertake active part in business. Principals only write to S. O., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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**WANTED**, for Edinburgh, exemplary Youth to learn Drug Business, and, if desired, afterwards enter Medical Profession; duties of Chemist and Doctor thoroughly taught, including Dentistry; time for entrance examination classes, also chemical, medical, dental; doctor's house; studies assisted; moderate premium. State age, particulars. Address, Box 675, Scotsman Office, Edinburgh.



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**VENDORS** will find our Offices a quick medium for the Sale of genuine Businesses. Strict confidence guaranteed. Several good-class Businesses wanted, returning £700 to £1,500. Town or country.

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**KENT.**—Good business town, 30 miles from London; Retail, Dispensing, and Prescribing; returns £700; good profits; large well-fitted shop, in excellent position; large house; price £450.

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35 Milsom Street, Bath,  
October 29th, 1890.

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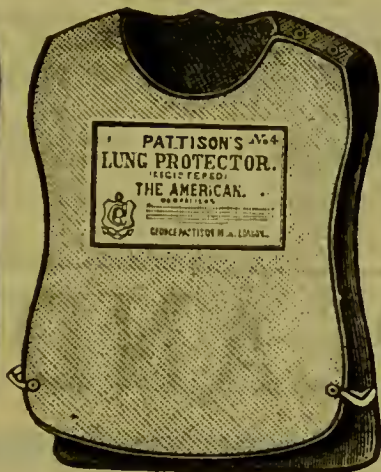
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(From the Cantor Lecture, 1885.)

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1. It must contain practically no free alkali.
2. It must be made from materials free from all trace of rankness, coarseness, or rancidity—i.e., the fatty matters and oils, &c., used in its preparation must be of the best quality, carefully selected.
3. It should not be liable to discolour or brown to any great extent on keeping; soaps which have undergone this change occasionally acquire the power of injuriously affecting sensitive skins causing blotching and irritation, even though free from excess of alkali to any marked extent.
4. To be of high quality a toilet soap cannot contain large percentages of water, for this entails the use of saline matters to “close up” and harden the mass; and these, if present in any quantity, are not unlikely to affect the skin injuriously.
5. If tinted or “medicated” by intermixture with non-saponaceous matters, the soap must not contain any compounds capable of causing irritation, and especially should be free from poisonous metals, and notably from mercury, lead, copper, and arsenic.
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This Section of "The Chemist and Druggist" must be closed for press by Thursday noon of each week.

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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to 'The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.' and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

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A quantity patent and homoeopathic medicines, cheap. 221/23.

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Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

Brooks's reliable recipes, after many years, still stand first. "Glycerine Cream," perfection of winter requisites; elegant, not sticky, delicately perfumed; cures chaps, roughness, redness, &c., rendering the skin like velvet (sale at Hornsey last year trebled itself). "Balm of Glycerine and Liquorice," splendid all-round cough cure; nice taste, elegant look, perfectly safe for children or adults; capital for retailing by oz; 2-oz. bottles cost 2s. 6d. doz. "Sweet Memories," latest pungent, exhilarating, exquisite bouquet, much admired, sells well; list of 400 others free; recipes 7d. each, three for 1s. 6d., with directions free. Latest addition—special—"Sweet Solid Perfume," 2d. blocks, nothing like them in market, pronounced far and away best; sale increases weekly; recipe and sample dozen, free, 3s. 6d. If you doubt genuineness send postal order, or 1s. stamps, for sample of above four; post free in England. Tom Brooks, Chemist, Hornsey, London, N.

#### Educational.

Numerous pharmaceutical and scientific books; cheap; send for list. Lewis, 60 Thorold Road, Ilford.

Druitt's "Surgeon's Vade Mecum," 16s.; last edition, edited by Dr. Stanley Boyd, 10s. Carter's "Elements of Medicine," 9s.; 4th edition, 5s. 6d. Roscoe's "Chemistry," 4s. 6d.; 1886, 3s. Ringer's "Therapeutics," 15s.; 9th edition, 9s. "Chemist," The Crescent, West Kirby.

#### Shop Fittings.

Dispensing-screen, very handsome, 7 ft. long, with circular sponge-case and glass counter under same; price 20l. Philip Josephs, 54 Old Street, Goswell Road, London, E.C.

Counter, with plate-glass front, 12 ft. long; solid mahogany; price 12l. 10s.; also several others. Phillip Josephs, 54 Old Street, Goswell Road, London, E.C.

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Second-hand shop-fittings, show-cases, shop-rounds, specic jars, carboys, pill-machines, utensils, and every necessary for chemists commencing or fitting up branch shops, at half the usual prices; state requirements or call. Natali & Co., 184 Aldersgate Street, London, nearly opposite Maw's.

Ten 3-lb. maroon jars, dome covers, gilt mouldings, inside linings, gold labelled, and 12 8 oz. ditto, 3l. 17s. 6d.; one specic jar, 3l.-in. high, with gilt glass cover, scroll label, 1l. 15s.; new specic-jars, 12½ in. high, with gilt-glass covers, 2s. 10d. each; new plate-glass counter-case, ebonised, 4 ft. by 2 ft. by 9 in. high, trays, mirrors on flaps, 4l. 10s. ore 16-gall. globe, cut stopper, 1l. 10s. several nests of drawers; shop rounds. W. Hawke & Son, Wild Court, W.C., near Great Wild Street, London.

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Microscopic slides, medical educational, interesting, from 2s. 6d. per dozen; li. ts. B., 233, Malda Vale, W.

Six gross 6d. perfumes, clean, boxed, 2l. 9d.; eight original pint bottles heliotrope, No. 30, 7s. 2d.; sample, 4 stamps. 221/27.

Twenty-one single and 4 double S. & O. trusses, various sizes; "Kennard" check till, cost, 4l. 4s.; no reasonable offer refused. Younger, Brampton, Camb.

Job lots of mineral-water and other bottles; 100 gross split lemons; 50 gross 10-oz. square dark coffee extracts; 30 gross oberry brandy quarts; what offers to clear? 85/61.

Two specic-jars (want re-labelling), height with mahogany stands, 34 in.; four pairs ladies', two pairs gents' Dinneford's flesh-gloves, 5s., good condition; what offers? McGibbon, Wath-on-Dearne.

Microscope (inch, half, quarter), in case, with drawer, slides, condenser, &c.; nearly new; 4l. 10s., for 3l. Dispensing-scales; nearly new; Maw, ng. 3; 3l. 10s., for 2l. 10s. William F. Tooner, Chemist and Druggist, Coldstream.

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Saleable patent medicines; cash or exchange. 221/23.

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Quain's "Dictionary of Medicine," last edition. Barlow, 7 Exchange Street, Manchester.

Copies of the *Chemist and Druggist* for October 18, 1890; 3d. each will be paid for clean copies. Publisher, THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

Two window show-jars, good condition, with mahogany bases. Also one 4-gallon carboy, with plain stopper; price, &c. Ker, Tweedie, Chemist, Lochgelly, Fifeshire.

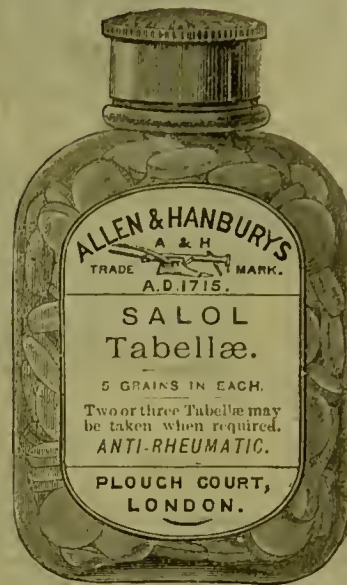


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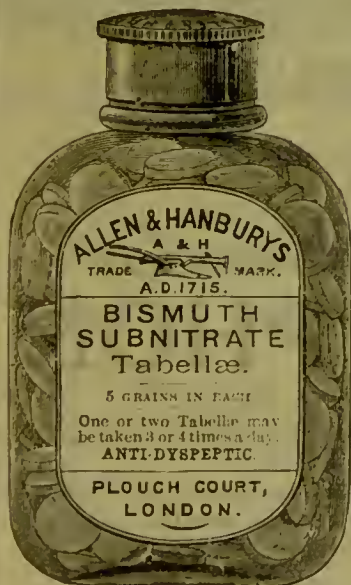


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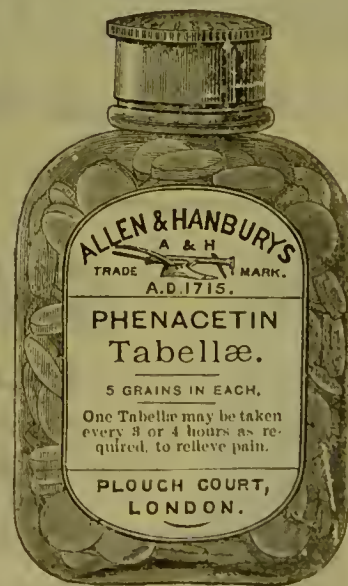


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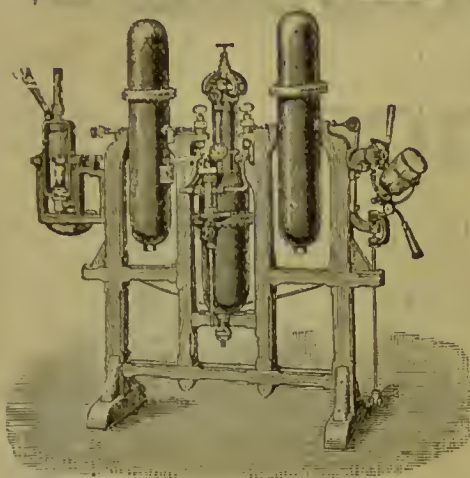
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Machines, in two sizes, at 25 guineas and 30 guineas. All complete. With the smaller a lad can make easily in ten hours twenty dozen Syphons or 100 dozen Bottles; with the larger, thirty dozen Syphons or 175 dozen bottles.

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I have examined during the present year the Machines for making Aërated Waters invented by Mr. Lozé, and I have formed a very high opinion of them. No lead is found in any part which comes in contact with the water, and the process is one which produces absolutely pure Carbonic Gas. Accordingly I find that the effervescing water produced is free from every injurious metal or contamination, and has a better flavour than that produced in the ordinary way.  
J. CAMPBELL BROWN, D.Sc.

CHEMICAL LABORATORY, 20 ALBERT GATE, MANCHESTER, 21st August, 1889.  
GENTLEMEN,—At your request I have visited the works of Messrs. A. Lozé & Co., of Prescott Street and Tuebrook, Liverpool. I have inspected his patented Apparatus for producing Aërated Waters, and have analysed the Aërated drinks manufactured. The results of analysis quite justified the inferences which were drawn from a knowledge of the materials used. Thus, instead of using ordinary whiting (as the source of carbonic acid gas), which gives off small quantities of offensive gases when acted upon with acid, Mr. Lozé uses one of the pure soluble bicarbonates of either Potash or Soda; the use of this salt enables the apparatus to be much simplified in form, as no gas washer is required, but the carbonic acid gas may be led at once into the liquid in the Saturating Cylinders. The Aërated drinks produced are of very high quality, both as to purity and as to Aëration, and the apparatus possesses the merit of extreme simplicity and efficiency.—Faithfully yours,  
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Dear Mr. Lozé,—I am pleased to inform you that I have been able to work the Machine sold to me by you without previous knowledge. With your patent Turnover I can bottle Patent Stoppers at the rate of two dozen per minute. Syphons and Corked Bottles I can fill much quicker than what you advertise the Machine to do.  
The Aërated Waters produced have been sampled by a number of gentlemen, and pronounced by them to be of a most excellent quality.—Wishing you every success, I remain, yours truly.  
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FOR THE EFFECTIVE TREATMENT OF

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Catarrh of Larynx and Stomach, the Enlargement of Liver and Spleen,  
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Year	No. of Members	Dividend
1878	119	None
1879	350	None
1880	430	None
1881	540	None
1882	615	3½
1883	708	5

TELEGRAPHIC

Chemists Starbeck Harrogate

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BRADFORD, 1882.

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1886	1,463	6
1887	1,612	7½
1888	1,892	5
1889	2,031	7½

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**INCREASE OF SALES.**—The Sales for the Half-year ending March 31, 1890, show an increase of 30 per cent. over the corresponding period of previous year.

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	In Corked Bots.	In Syphons.		In Corked Bot.	In Syphons.
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Soda " 5 Grains to Half-Pint ..	1/-	1/8	Ginger Ale .. ..	1/-	2/6
Soda " B.P. 15 " " ..	1/-	1/8	Ginger Beer, Glass .. ..	1/-	2/6
Potash " 5 " " " ..	1/-	1/6	Lithia, B.P., 5 grains to Half-pint ..	1/6	2/6
Potash " B.P. 15 " " ..	1/-	1/6	Iron and Quinine Water .. ..	1/6	—
Seltzer " " " " " " ..	1/-	1/6	Mineral Acid .. ..	1/6	—
Lemonade " " " " " " ..	1/-	2/6			

Syphons, 24s. per dozen.

Cases—3 dozen 3s. 6d.; 4 dozen 4s. 6d.; 6 dozen 5s. 6d. each.

Empties allowed for at same prices.

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SAMPLE CASE OF WATERS SENT FREE.

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TRADE MARK.

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Highly sterilised and concentrated, the only rational one, free from microbes, acknowledged the most efficacious means of restoring **STRENGTH, DIGESTION, and APPETITE.**

It suits the most fastidious stomach, and is pleasant to the taste.

**LIQUID STERILISED PEPTONATE OF IRON.**

The most active and assimilable of all ferruginous preparations. Specially recommended in all cases where the stomach cannot bear iron in the ordinary forms.

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"A sample of the above preparation has been forwarded to us. It is described as 'meat juice obtained by a cold process, with the addition of a carbohydrate.' We have tried the preparation and can speak highly of its nutritive value. Moreover, it is readily assimilable and not unpalatable. We consider it a preparation of undoubted value in cases of wasting disease and of debility."—*The Journal of Laryngology and Rhinology*, edited by Sir Morell Mackenzie, M.D., Lond., and R. Norris Wolfenden, M.D., Cantab.

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"It is a very valuable addition to the certainly varied, though not too choice list of beef-juice preparations—it stands decidedly first, as a nutritive, in addition to which it is so palatable, and forms a most grateful and pleasant beverage, administered in lime-juice.

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July 18, 1890.

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"I have much pleasure in stating that I have given Caffyn's Liquor Carnis, with great benefit, in typhoid and in other cases of exhaustion. I have also prescribed it in cases of vomiting during pregnancy with very good effect. I consider it to be an excellent preparation, and shall prescribe it in all cases of great debility."

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"The two bottles of Caffyn's Liquor Carnis were given to children in state of great nerve exhaustion.

"In both cases your preparation seemed to possess what you claim for it—great restorative power and ease of assimilation."

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May 21, 1890.

"This is evidently a meat extract prepared in the cold and preserved by glycerine. It is extremely rich in nitrogen, and the ash contains phosphates in considerable quantity. So well are the soluble albuminoids of the meat preserved that the fluid when heated turns into a semi-solid jelly. It is a really valuable nutrient."—*The Lancet*, July 12, 1890.

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"Liquor Carnis is a capital nutritive food which I have found of great use in treating many of our wasting and inflammatory diseases of childhood. It is palatable and easily absorbed, and in most cases I have tried it I have found it is readily taken by children.

"As a form of rectal alimentation I consider it quite equal in its absorbent properties to defibrinated blood, and superior to it in its nutritive power."

W. SNOWBALL, M.D., Melbourne,

Physician to Children's Hospital.

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(Extract from Letter.)

"I think that a large part of its future success will depend on the fact that the great men of the medical profession and the public have long wanted, and will therefore greatly appreciate, a preparation which is practically a natural product, and which appeals to common sense and practical knowledge.

"At present we are bewildered and disgusted at the number of meat preparations in the market. Their high price and varying dietetic and medicinal value, as well as the preposterous claims often put forward on their behalf, have weakened one's belief in any of them.

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For many years Resident Medical Officer, East

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Late Resident Medical Officer Royal Free Hospital.

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 Retail Prices, 2/- and 3/6 Bottle.

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# THE FIRST RAW FOOD EXTRACT.

(Introduced to the Medical Profession in 1878.)

AN IDEAL FOOD.

PALATABLE.

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A CONDENSED FOOD

## BOVININE

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20 PER CENT.  
OF  
COAGULABLE  
ALBUMEN.

THE VITAL PRINCIPLES OF BEEF CONCENTRATED.

**BOVININE** consists of the juices of lean raw beef obtained by a mechanical process, neither heat nor acid being used in its preparation. The nutritious elements of lean raw beef are thus presented in a concentrated solution, no disintegration or destruction of the albumen having taken place. The proteids in solution amount to twenty per cent. of the weight of the preparation, and give to it the great dietetic value it possesses in all conditions where a concentrated and readily assimilable food is needed.

**BOVININE** is entirely distinct from the numberless meat preparations prepared with heat. It is a Food, pure and simple, Highly Concentrated, and the most Nutritious yet presented.

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## ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

**NOTE.**—The Folios shown in this Index are those at the FOOT of the Page, and not at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of Page	Foot of Page	Foot of Page	Foot of Page
Acard, E. .... 56	Eades' Pills ..... 38	Liquor Carnis Co. (Lim.) ..... 19	Sanitas Co. The ..... Text 622
Allen & Hanburys ..... 13	Eau du Botot ..... 49	Liverpool Lint Co. .... 43	Savory & Moore ..... 18
American Toilet Co. .... 46	Elliman, Sons & Co. .. 3, Text 622	Lofthouse & Saltmer ..... 34	Schacht, W., & Co. .... 16
Apollinaris Co. .... Cover	Ellis & Son ..... 26	London Homoeopathic Hospital	Seabury & Johnson ..... 42, 46
Armbrrecht, Nelson & Co. .... 39	Eschmann Bros. & Walsh ..... 47	Medical School ..... 6	Shirley, A. W. .... 45
Assistants Wanted ..... Col. Sup.	Exchange Column ..... 12	Lowe, C. .... 57	Silicated Carbon Filter Co. Text 622
Austin & Co. .... 55	Filce, E. .... 46	Lozé, A., & Co. .... 14	Sinclair, Tweedie & Co. .... 54
Australian Meat Co. .... 21	Fink, F., & Co. .... 56	Lucas, C. W., & Co. .... 56	Singleton & Cole (Lim.) ..... 55
Aylwin, W. E. .... 21	Fletcher, Fletcher & Stevenson 5, 56	Lynch & Co. .... Cover	Smith, S., & Co. .... 52
			Solport Bros. .... 42
Baelz, R., & Co. .... 55	Ford, Shapland & Co. .... 10	Macnair, A., & Co. .... 56	South London School of Phar-
Barnett & Foster ..... 14	Fruneau, E. .... 56	May & Baker ..... Cover	macy (Lim.) ..... 6
Barrett, R. H. .... 50	Fuerst Bros. .... 34	May, Roberts & Co. .... 22	Southall Bros. & Barclay ..... 31
Barron, Harveys & Co. .... 38		Melin, C. .... 54	South-West London School of
Bayley & Co. .... 49	Gardner, W. .... 50	Millar, A., & Co. .... 14	Pharmacy ..... 6
Berkley, J. .... 57	Gem Glass Co. .... 8	Miscellaneous Advertisements	Stern, G. & G. .... 7
Billault ..... 34	Gilbertson, H., & Sons ..... 36	Coloured Supplement	Stevens, P. A. .... 57
Blair's Gout Pills ..... 57	Girard Fils ..... 53	Moller, P. .... 38	Stokes, G. R., & Co. .... 54
Blake & Mackenzie ..... 10	Goodall, Backhouse & Co. .... 26	Moss, J., & Co. .... Text 622	Stott, S., & Co. .... 26
Blondeau & Cie. .... 11	Government Sanitary Co. .... 53	Mumford, G. S. .... Text 622	Symington, T., & Co. .... 4
Blyton, Astley & Co. .... 27	Greiff, R. W., & Co. .... 35		
Boehm, F. .... 34	Greensill, T. S., & Son ..... 58	National Chemical Co. .... 52	Taddy & Co. .... 16
Boissy ..... 56	Guy's Tonic ..... 52	Newbery, F., & Sons ..... 25	Thompson, W. P., & Co. .. Text 622
Bowdlear, W. H., & Co. .... 53		Noakes, B., & Co. .... Text 622	Toogood, W. .... 51
Bragg, J. L. .... 21	Hamilton & Co. .... 55	Northern School of Pharmacy 6	Townsend, J. .... 2
Bratby & Hinchliffe (Lim.) .. 15	Hargreaves, Dr., M.K., M.D. .. 8		Treant, R. C. .... 49
Brunner, Mond & Co. .... 32	Hatrick & Co. (Lim.) ..... 47	Palau & Cie ..... 54	Truefitt, H. P. (Lim.) ..... 48
Burgoyne, Burbridges & Co. .... 38	Hay, W. .... 16	Pattison, G. .... 9	Tunbridge & Wright ..... 48
Burroughs, J. .... 53	Hearon, Squire & Francis ..... 30	Peterson, M., & Co. .... 8	Tyrer, P. .... 21
Burroughs, Wellcome & Co. .... 29, 30	Hildesheimer & Faulkner .... 8	Phillips, G., & Co. .... 52	
Bush, J. P. Manufacturing Co. 20	Hooper & Co. .... Cover	Potter & Clarke ..... 41	Vaccine Association ..... 45
	Horn & Son ..... 56	Poulenc Frères ..... 42	Van Houten's Cocoa ..... 31
Cadbury Bros. .... Cover	Howards & Sons ..... 33	Quilliam, J., & Co. .... 57	Vogeler, The C. A., Co. .... 22
Carter, J. H. .... 54	Hyde, Nash & Co. .... 57		Vogt, G., & Co. .... 49
Chalmers, W. B. .... 50		Radam's Microbe Killer Co. .. 34	Walker, Troke & Co. .... 53
Chemists' Aerated and Mineral	Isaacs, I., & Co. .... 50	Randall & Son ..... 38	Watson & Wates ..... 55
Waters Association (Lim.) .. 17	Jackson, H. .... 58	Rankin, W., & Sons ..... 44	Wedgwood, J., & Sons ..... 8
City School of Chemistry and	Jewshury & Brown ..... 46	Raphael, J., & Co. .... 10	Wilcox & Co. .... 41
Pharmacy ..... 6	Jeyes' Sanitary Compounds Co.	Riddough, F. .... 57	Wilford & Co. .... 57
Colthurst & Harding ..... 49	(Lim.) ..... Text 622	Robinson & Sons ..... 43, 56	Wood, F. .... 42
Cook, Edward, & Co. .... 58	Jones & Co. .... 52	Robinson, B. .... 20	Wood, V. .... 43
Corsan, J. R. .... 8	Kay Bros. (Lim.) ..... 8	Robinson's Pills ..... 58	Woolley, James, Sons & Co. .. Cover
Cyclostyle, The, Co. .... 56	Kent, G. B., & Sons ..... 46	Rookledge, J. .... 53	Wolstencroft & Co. .... 57
	Lakin, W. H. .... 57	Rowntree & Co. .... 20	Wright, Layman & Unwin
Davis, J. .... 10	Layng, R. C. .... 56	Sainsbury, S. .... 56	Text 622, Cover
Davis, J., & Co. (Lim.) ..... 6	Learner, A. J. .... 57	Sanders, H. G., & Sons ..... 47	Wyleys & Co. .... 57, 44
De Carle & Son ..... 26	Lee, T. P., & Co. (Lim.) ..... 57	Sanford & Son ..... 56	Young, R. D. .... 47
Dee Oil Co. (Lim.) .... 48	Levermore, A., & Co. .... 53	Sanger & Sons ..... 44	Ziemer, B. W., & Co. .... 48
Denaeyer's Peptones and Ex-			
tract of Meat Co. (Lim.) .... 18			
Downie B. I. P. Co. .... 34			
Dukas & Co. .... 47			
Durrant & Co. .... 57			

## CLASSIFIED LIST OF ALL ADVERTISERS

Whose Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

<b>AERTD &amp; MINERLS</b> Apollinaris Co. Barnett and Foster Chemists' Aerated Waters Association. Ellis & Son (Ranthin) Frans, Joseph, Co. Hassall and Co. (Citric Acid Phospho) Hay, W. Idris and Co. Kinmond and Co. Jewsbury and Brown Mills and Co. (Bonne) Schacht, W., & Co. Taylor, T. and P. J. [See GINGER ALE]	<b>AMMONIA</b> May and Baker. White, A., and Sons Woolley, Sons and Co.	<b>BATH GLOVES</b> Thompson, Walters, Hole and Co. (Lim.)	<b>BLOOD MIXTURE</b> Lincoln and Midland Counties Drug Co.	<b>CAPSULES</b> (METALLIC) Betts and Co. Brooks, Peel and Co. Melin, O. (Machine) Sanders, H. G., and Son
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Toogood, W.

**FLY PAPERS**

Biddies, W.  
Ford, Shapland and Co.  
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Tunbridge and Wright  
Wilson, S.

**FOOD (Infants' & Invalids')**

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Baelz, L., and Co.  
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Bragg, J. L. (Charcoal Blacnits)  
Bush, J. P., Manufacturing Co.  
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Lieble Co.  
Liquor Carnis Co. (Lim.)  
Mottershead & Co. (Benger's Food)  
Nestle, H.

**FORMULAE**

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Howard, H.  
Holloway's  
Hooper's  
Hearon, Squire, and Francis  
McKesson and Sons  
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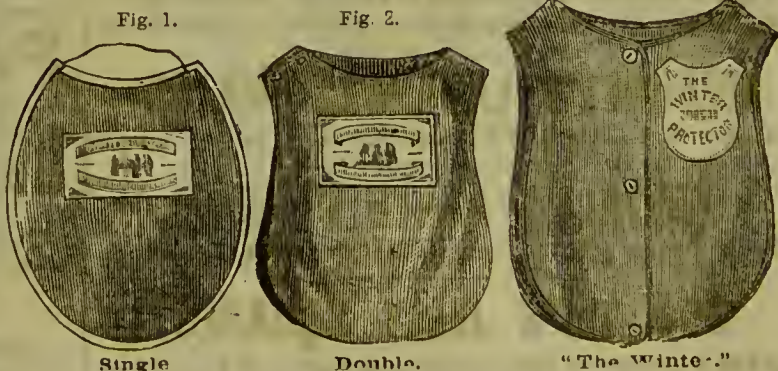
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" " 3 .. .. .	0	9 6
" " 4 .. .. .	0	11 0
" " 5 .. .. .	0	15 6
" " 6 .. .. .	1	6 0
Double (Fig. 2).—No. 1 .. .. .	0	14 0
" " 2 .. .. .	0	18 6
" " 3 .. .. .	1	2 6
" " 4 .. .. .	1	8 0
" " 5 .. .. .	1	16 0
" " 6 .. .. .	2	4 0
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No. 1 .. .. .	0	18 0
" 2 .. .. .	1	4 0
" 3 .. .. .	1	10 0
" 4 .. .. .	1	16 0
" 5 .. .. .	2	2 0

Fig. 3.

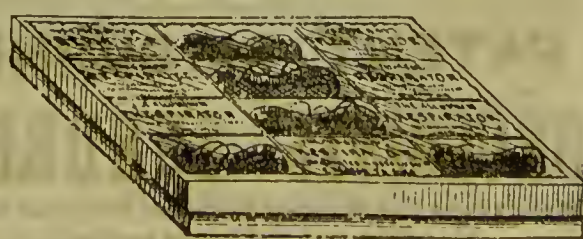
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# Soluble "Tabloids" of Compressed Drugs.

THESE "Tabloids," originated and introduced into this country by us, many years ago, were used chiefly for affections of the throat, &c., and were purposely compressed hard in order that they might dissolve slowly, and give the advantages of a concentrated



solution of the drug acting continuously upon the diseased surfaces. The fact of these "Tabloids" being so hard has led many to believe that "Tabloids" were unsuitable for administering medicines when prompt solution or disintegration was required. This, however, is an error, because the **SOLUBILITY** or **DISINTEGRATION** of the drug

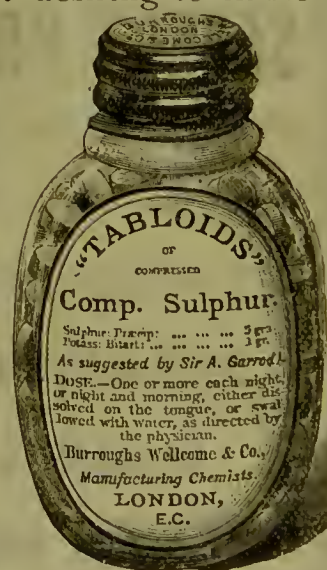
depends very much upon the force of compression. Our "Tabloids" of Chlorate of Potash and the Voice "Tabloids" are compressed so hard that one of them will take an hour or more to dissolve upon the tongue, whereas the "Tabloids" of Quinine, Salol, Antipyrin, Phenacetin, Sulphonal, Compound Sulphur, and many others, as now prepared by us, owing to recent improvements effected by us, constitute the most soluble form of the drug next to an actual solution. This fact can be readily tested by placing one of these new "Tabloids" upon the tongue, and we shall be pleased to supply specimens to any medical man or chemist desiring to make the experiment. Recent improvements in our machinery enable us to regulate the pressure with the greatest nicety; every batch of "Tabloids" is now tested before being bottled, and we are prepared to guarantee that all of our newly improved "Tabloids" of Compressed Drugs intended to be swallowed for prompt constitutional effect will dissolve or disintegrate promptly.

Mr. H. M. Stanley, in his work, "The Congo," vol. ii., pages 225 and 327, refers to their value, and in his latest work, "In Darkest Africa," vol. i., chap. 1, writes as follows:—

" . . . . Every drug was in 'Tabloids' mixed with **QUICK SOLVENTS**. . . . . Nothing was omitted, and we all owe a deep debt of gratitude to these gentlemen . . . . . for the

personal selection of the best that London could furnish, and the supervision of the packing, by which means we were enabled to transport them to Yambuya without damage."

Again, the Editor of the *British Medical Journal* writes (July 12, 1890):—"Surgeon Parke has personally informed us that the concentrated preparations and 'Tabloids' retained their efficiency throughout the whole journey, and were of the utmost value by reason of their efficiency and portability."



We shall be happy to send our complete Illustrated Price List and trial specimens of Soluble "Tabloids" to pharmacists post free upon request.

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Aconitin (Duquesnel) ...	1-260 gr.	Hydrarg. Perchlor. ...	1-60 and 1-30 gr.
Aloln ...	1 gr.	Hyoscyamin (Meick) ...	1-80, 1-10, and 1-10 gr.
Apomorphine Hydrochlor ...	1-15 and 1-10 gr.	Morphine ...	1-200 and 1-75 gr.
Atropin Sulph. 1-150, 1-100, and 1-60 gr.		Morphine Bi-Meconate, 1-8, 1-6, 1-4 and 1-3 gr.	
Cocaine Hydrochlorate ...	1-6, 1-4, and 1-2 gr.	Morphine Hydrochlorate ...	1-4 gr.
Caffein Sodio-Salicylate ...	1-2 gr.	Morphine Sulphate, 1-12, 1-8, 1-6, 1-4 and 1-2 gr.	
Codein Phosphate ...	1-4 gr.	Morphine and Atropine combinations.	
Cinchin ...	1-100 gr.	Pilocarpin ...	1-10, 1-3, and 1-2 gr.
Cornutiu ...	1-60 gr.	Quinine Hydrobromate ...	1-2 gr.
Curare ...	1-12 gr.	Sclerotic Acid ...	1-2 and 1 gr.
Digitalin ...	1-100 gr.	Spartel Sulphate ...	1-2 gr.
Ergotin ...	1-150 gr. and 1-300 gr.	Strophanthin ...	1-500 gr.
Eserin ...	1-100 gr.	Strychnine 1-150, 1-100, and 1-60 gr.	
Homatropin (unirritating) ...	1-250 gr.		

Supplied in Tubes of 12 to 20 Tabloids at 12s. per dozen tubes.  
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The Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

## Literary Contents.

	PAGE		PAGE
A.B.C. Liaiment.....	626	Foreign News.....	619
Bankruptcy Reports.....	617	French Pharmaceutical News..	617
Commentary.....	625	Gazette.....	617
Correspondence:—		Home News.....	609
Company Pharmacy; Too		Legal Reports.....	618
Much Study; Look to Your		Manchester Druggists and the	
Acids; Pepsin.....	635	Pharmacy Bill.....	611
Warrington Chloroform;		Marriages.....	629
Copper in Extracts.....	636	Metropolitan Reports.....	608
Qualified Assistants in Ire-		Midland Counties Chemists'	
land; No Irish Need Apply;		Association:	
The Salicylic Acid Proce-		Mr. A. Southall on the	
dure; Making Ginger-		Pharmacy Bill.....	614
beer.....	637	New Companies.....	629
Dispensing Notes.....	637	Our Town Traveller.....	627
Legal Queries.....	637	Personalities.....	629
Miscellaneous Inquiries.....	638	Provincial Reports.....	608
Deaths.....	629	Scientific Notes.....	630
Editorial Notes:—		Stereo-Chemical Theories.....	620
The Sale of Poisons.....	622	Trade Notes.....	629
The Vulnerable Point.....	624	Trade Report.....	630
The French Pharmacy Bill.....	625	Wills of Deceased Chemists.....	617
Examinations in October.....	610		

MR. CARTEIGNE has been addressing the chemists and druggists of Manchester in advocacy of the Pharmacy Bill. He has engaged to visit Birmingham and Liverpool during November.

THE MIDLAND COUNTIES CHEMISTS' ASSOCIATION has been started for the session by an address from its president, Mr. A. Southall. The address is very orthodox, unity and submission to the decrees of the Pharmaceutical Council being earnestly advocated. Mr. Southall gives also some useful notes on the newest chemical medicaments.

**LEGAL.**—An unregistered person has been prosecuted at Glasgow, under the 15th section of the Pharmacy Act, for dispensing mixtures containing poisons. The shop belonged to a qualified doctor, who testified that in each case his unregistered assistant showed him the prescription before dispensing it. The Sheriff held that this was not sufficient, and imposed fines on the unregistered assistant.

COMPANY PHARMACY.—The registration of two new "chemist and druggist" companies is reported.

FRENCH PHARMACY LAW. A new Bill, comprehending a number of heroic proposals, has been drafted by a Commission of the Chamber of Deputies appointed to consider several measures which had been submitted by various deputies.

## Practical Notes and Formulæ.

## PRESERVING FRESH FRUIT.

As the result of experiments made at the Institute for Fruit-growing and Viticulture in Geisenheim (Austria), it has been demonstrated, says the *Rundschau*, that freshly-gathered fruit may be best preserved by wrapping each piece separately in tissue paper and placing it between layers of wood wool. Pears should be placed in layers of ground cork. Fruit thus preserved keeps for a long time if placed in a well-warmed apartment.

AQUA MELLIS.

THE following is given by a French journal as the formula used by a celebrated London perfumer :—

Coriander seeds	..	..	..	..	7 lbs.
Cloves	..	..	..	..	12 oz.
Storax	..	..	..	..	8 "
Nutmegs (bruised)	..	..	..	..	8 "
Lemon peel	..	..	..	..	10 "
Calamus..	..	..	..	..	6 "
Proof spirit	..	..	..	..	15 pints
Water	..	..	..	..	8 "

Macerate for a month in a closed vessel, then distil 22 pints, and to the distillate add:—

Orange flower-water	..	..	..	..	5 pints
Otto of rose	..	..	..	..	24 drops
Ambergris	..	..	..	..	1 grain
Vanilla	..	..	..	..	2 oz.

Macerate for eight days and filter.

### MUSTARD LEAVES.

AN investigator communicates to *Rundschau* some interesting facts regarding the strength of the more popular Continental mustard papers, and tabulates the results as follows:—

Maker's Name.	Weight of Substance on 100 sq. cm.	Percentage of Ol. Snap. Ess. on 100 sq. cm.	Per cent. of the Oil in the Meal
Fellgiebel & Ismer, Schonberg ..	1.72	0.0224	1.380
Dusseldorfer Fabrik Krakau (Austria- Seufpapier) .. .. .	2.62	0.0326	1.258
J. Decker, Landsberg .. .. .	1.29	0.0158	1.220
M. Jasper, Berlin .. .. .	2.82	0.0295	1.049
Rigollot, Paris .. .. .	2.39	0.0349	1.048
Rueff, Frankfurt a. M. .. .. .	1.24	0.0156	1.260
F. Lang, Wien (Wr. Seufpapier) ..	1.05	0.0134	1.281
G. Hell & Co., Tropau .. .. .	3.40	0.0250	0.730
E. Dieterich, Helfenberg .. .. .	1.56	0.0093	0.468

According to these figures Rigollot's leaves come out the best so far as the actual amount of essential oil to the surface of leaf is concerned, but Fellgiebel's appears to be the richest in oil, judged on the analysis of the mustard meal. An endeavour was made by a "physiological experiment" to find how the figures were related to each other, 3 square centimetres of each plaster being placed on the arm and the smarting and redness produced at the end of ten minutes noted. The conclusion arrived at was that the amount of oil per surface space has little to do with the vesicating properties of the leaves provided the layer of material is not too thin. The order in which the results are given is the order of the various plasters as determined by the physiological experiments.





**CHEMISTS' ASSISTANTS' ASSOCIATION.**—The next meeting will be held on Thursday, November 6, at 9 P.M., when a paper will be read on "The Chemistry of Organic Dyes," by F. W. Passmore, Ph.D. (Würzburg). Mr. A. H. Allen has been compelled to postpone his paper on "Our Breakfast Beverages," originally fixed for this date.

**THE "WESTERN CHEMISTS' ASSOCIATION (OF LONDON)"** invites all chemists and druggists in business, whether members of the association or not, to meet at Browning's Westbourne Restaurant, Spring Street, Paddington, at 9 P.M. on Wednesday, November 5, to consider and discuss the new Pharmacy Bill. Mr. Frederick Andrews, honorary secretary, signs the notice.

**THE CAMBERWELL DISPENSER.**—At the fortnightly meeting of the Camberwell Board of Guardians the Dispensaries Committee recommended a gratuity of 20*l.* to Mr. Lindsay, the Board's dispenser. Mr. Sugden moved the adoption of the report, stating that Mr. Lindsay was a most excellent servant to the Board, and did his work remarkably well. In reply to Dr. Massey, the clerk said Mr. Lindsay's salary was 150*l.* per annum. It was, however, proposed some time ago to increase the sum to 170*l.*, but the Local Government Board refused to sanction it. The motion was seconded, and adopted.

**KEPLER CRICKET CLUB.**—The club which is thus distinguished is made up, as might be surmised, from among the employes of Messrs. Burroughs, Wellcome & Co. The members and a number of visitors sat down on Wednesday evening to the first annual supper, at the Mitre Hotel, Mr. R. C. Sudlow occupying the chair. The substantial meal was followed by speeches and songs in alternation, which kept the company together till a late hour. It was stated among other things that, although only one year in existence, the club had made a good record on the "pitch." A special feature was the presentation of a valuable ring to Mr. Langley, who leaves shortly for the antipodes, to take a position in the Australian branch of the firm.

## Provincial Reports.

*Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.*

### BIRMINGHAM.

**MR. CARTEIGHE** has arranged to be in Birmingham on Tuesday, November 18, to meet the Midland Association members and the pharmacists of the district.

**ANOTHER LADY PHARMACIST.**—Miss Wright, dispenser at the Sutton Dispensary, has passed the assistants' examination of the Apothecaries' Hall, London.

**MR. C. THOMPSON** has been selected as local secretary to the Pharmaceutical Society under the new *modus operandi* of electing these officers.

### HULL.

**THE CHEMISTS' ASSOCIATION.**—We learn that this association is by no means dead, and is always prepared to take action in matters affecting local chemists. The last good work that it did in this connection was in regard to the Railway and Canal Traffic Act of 1888. The present officers of the association are:—Mr. B. M. Stoakes, president; Mr. J. S. Linford, vice-president; Mr. Chas. B. Bell, hon. secretary and treasurer; committee, Messrs. Ward Shaw, T. Kenny, W. Staning, and C. W. Brighthouse.

### LIVERPOOL.

**THE PHARMACY BILL.**—It is understood that Mr. Carteighe has accepted an invitation from the Chemists' Association to visit Liverpool about the middle of November, to discourse on the new Bill and other matters affecting pharmacy.

**ROYAL INFIRMARY.**—The new and extensive buildings constituting the Royal Infirmary were opened by the Duke of Clarence and Avondale on Wednesday afternoon, in the presence of a large gathering of the medical profession and the numerous supporters and friends of the institution.

**PHARMACEUTICAL STUDENTS' SOCIETY.**—The first meeting of the session was held on October 23, the vice-president, Mr. J. R. Johnson, in the chair. A paper was read by Mr. T. S. Wokes, on "Plasters and Plaster-spreading." Mr. Wokes deplored the fact that, owing to the introduction of machine-made plasters, apprentices did not get sufficient practice to enable them to become proficient in the art of spreading a plaster, and consequently the average candidate for the Minor views the prospect of having a plaster to spread with considerable apprehension. Mr. Wokes described the various articles upon which plasters are spread, the different shapes used—noting that paper shapes adhere more firmly to the leather if smeared with a very little soft soap than if moistened with water. A shape made with old tea-lead is very serviceable. He discussed the heat to be used, pointing out that the active principles are liable to be affected by high temperature, as in the case of belladonna and opium. He stated that melting sufficient plaster in an evaporating-dish by means of a spirit-lamp, using the least possible heat, is much better than the old-fashioned way of melting the plaster by means of the spatula on paper. Mr. Wokes showed a number of plasters of various shapes quite equal to machine-made, also a self-heating spatula and gas-furnace lent by Messrs. S. Maw, Son & Thompson. A hearty vote of thanks was accorded to Mr. Wokes. Several dispensing queries were brought forward, one of which evoked considerable discussion—a mixture consisting of: menthol, 3ij; ammon. chlor., 3ss.; sp. aether. chlor., 3ij.; aq. cinnam. ad, ʒxij. Ft. mist.

**A DOCTOR'S BILL DISPUTED.**—At the County Court on October 23, before his Honour Judge Collier, Mr. J. W. Steele, surgeon, Queen's Road, sued Mr. M. O'Fallon, of Boundary Lane, for 10*s.* medical fees for visiting and prescribing for the defendant's child. It appeared that the child, a girl, aged 6½ years, was taken ill in October, 1888, the plaintiff was called in, found her suffering from colic, and prescribed a mixture containing opium, with instructions for a dose to be administered every three hours. After taking the first dose, the child was sick, and thereupon the mother administered a second dose. After this, the child, according to the evidence, showed symptoms of collapse, and the father rushed off for Dr. Steele, who was not at home. He then got another doctor, who prescribed for the child, who speedily recovered, and on Dr. Steele presenting himself he was accused of poisoning the child, and was refused an inspection of the child and payment of his account. Asked why he had allowed the matter to remain so long, the plaintiff said he never brought actions to recover fees if he could help it; but he had to do so in this case as a matter of principle, the defendant having done him all the injury he could. After hearing the independent evidence of a medical gentleman unknown to the parties, who happened to be in court, his honour said that no doubt it was a large dose of opium, though perhaps not too great under the circumstances, and seeing that the second dose was given to the patient within a quarter of an hour of the first, and that the symptoms were caused by that, it would be manifestly unfair to hold that the doctor had done anything to disentitle him to his fees. He thought, however, it would be advisable for medical men, in giving prescriptions to persons like the defendants, who, of course, could not read Latin, and did not understand the properties of the drugs employed, to specify very particularly in the prescription how the medicine was to be administered. He gave judgment for the plaintiff.

### SHEFFIELD.

**THE PHARMACY BILL.**—At a council meeting of the Sheffield Pharmaceutical and Chemical Society, held on



Tuesday night, it was unanimously decided, after a lengthy discussion, much of which was devoted to the limited liability company difficulty, to support the new Pharmacy Bill.

#### YORK.

**PHARMACEUTICAL CLASSES.**—Writing in reference to our article on "Provincial Associations," Messrs. Raimes & Co. inform us that the arrangements made by them last winter for teaching chemistry to apprentices and assistants in their analytical laboratory have been highly satisfactory, and they have just formed another class for elementary chemistry for the younger apprentices in the city. Both classes, numbering fourteen students in all, meet on Wednesday evenings for one hour each, and are taught by Mr. D. Ryan, F.I.C. Each student pays a small fee—7s. 6d. per quarter—one-half of which goes to the teacher, and the rest for buying apparatus.

#### SCOTLAND.

##### ABERDEEN.

**ABERDEEN AND NORTH OF SCOTLAND SOCIETY OF CHEMISTS AND DRUGGISTS.**—The first meeting of the session was held on Wednesday evening, October 29. A meeting to discuss the proposed Pharmacy Bill is arranged for Wednesday, November 26.

**A PAINFUL POISONING CASE.**—A baby, ten weeks old, son of a lodging-house keeper named Watt, residing at 181 Union Street, was poisoned last week. The servant, in filling the feeding-bottle, accidentally put in some oxalic acid. The child died in ten minutes.

##### DUNDEE.

**THE ASSISTANTS' AND APPRENTICES' ASSOCIATION.**—At a meeting held on October 23, the Secretary read a paper on "Profitable Extras," by Mr. Thomas C. Henderson, chemist, Stornoway, who unfortunately was unable to appear in person. He pointed out in clever style numerous articles, such as perfumes, photographs, photo-chemicals, and other requisites, which could be sold with advantage by any chemist, and offered many hints. The paper was well received, and a vote of thanks was passed to the author.

##### INVERNESS.

**CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.**—At the meetings of this association this session lectures will be delivered by Dr. G. E. Kerr, Dr. James Murray, and Dr. D. MacRitchie. Mr. John Fraser will read a paper on "Pharmaceutical Ethics," Mr. Alexander Allan one on "Peter Squire," and Mr. Lewis McLeod will give "Some Experiences in the Testing and Stocking of Drugs." In addition to these ordinary meetings, there will be, we are told, meetings at which the members will "talk shop."

### Home News.

**POISONED BY A CORN-CURE.**—A blacksmith named Hunt of Booth Town, has died at the Halifax Infirmary from the effects of drinking a liquid which he used for corns on horses' feet.

**MR. BRAXTON HICKS CRITICISED.**—The inhabitants of Kingston have held a meeting, under the presidency of the Mayor of the town, to protest against the course which the coroner for the district, Mr. Braxton Hicks, has taken of ordering that bodies on which an inquest was to be held should be taken to the public mortuary. A particular case has aroused much feeling in the town. Mr. Hicks, it appears, maintains that he is acting according to law, but several legal gentlemen present at the meeting challenged this opinion.

**REGISTERED TELEGRAPHIC ADDRESSES.**—The Post Office recently issued a circular with the object of ascertaining whether an official directory of telegraphic addresses was

wanted. Mr. Henry Sell, of 167 Fleet Street, who publishes an unofficial directory, was informed by the Post Office that their contemplated work has been abandoned for the present. He therefore asked for their assistance for his directory, but this was refused. Mr. Sell now asks the press to call attention to the fact that he inserts any registered telegraphic address sent to him in his directory free of charge.

**KNOCKED DOWN BY A CAB.**—At Westminster Hospital, on October 24, Mr. John Troutbeck held an inquest upon the body of George Downing, sixty years of age, a chemist's dispenser, of 2 Great Peter Street, Westminster, who died from the effects of injuries inflicted in being knocked down by a cab, at Broad Sanctuary, on the evening of October 11. Mr. Fenn, chemist, of Regency Street, identified the body of the deceased, a gentleman in reduced circumstances, who had been in his service as dispenser. For some time past he had been in a feeble state of health. He had lately been in the service of Dr. Pearse, the police-surgeon. Deceased had received a university education. The jury agreed to a verdict of accidental death, and exonerated the driver of the cab from all blame.

**THE HAIR-DRESSER'S WASH.**—A case was tried at Bodmin County Court, on October 22, in which Mrs. Edyvean sued Mr. Hartley, a hair-dresser, for injury alleged to have been caused to an old gentleman named Phillips, who was in her care. Mr. Phillips was of somewhat weak intellect. He had gone to Mr. Hartley to have his hair cut. A wash had been used, and it was alleged that this wash had caused an inflammation of the skin. Mrs. Edyvean claimed 10l. 19s. for damages and doctors' bills. The defendant said the wash he used was simply water scented with oil of rosemary. It was the same he had used for forty years. He had a cantharides wash in another room which he sold, but which he never used. On the same shelf with the rosemary was a bottle of shampoo, which contained only the best yellow soap. After hearing medical evidence, the judge said he could not believe a strong compound had been used. He was certain there had been no negligence on the part of the defendant. He gave judgment for him.

**THE RAILWAY RATES INQUIRY.**—Representatives of the principal railway companies had an interview on Tuesday with the President of the Board of Trade, to lay before him their objections to the revised schedules of rates submitted to Parliament during last Session, as the outcome of the recent inquiry held by the Board of Trade. The companies recognise that the Board of Trade has rejected their demand that the new *maximum* rates should be fixed with regard to their existing powers. They still protest against this decision, but they accept it for the purposes of the present discussion. They say that, apart from this point, it has been repeatedly affirmed in Parliament, by different Governments and by all parties, that the main object of consolidation is simplicity and uniformity, not reduction of the revenues of the railways. But they declare that, according to calculations made with great labour, positive losses, in some cases of great magnitude, will be inevitable if the proposed scales come into force. These losses are given as for the Midland, 117,700l.; for the Great Northern, 34,489l.; for the North-Western, 113,600l.; for the Great Western, 65,000l.; for the Great Eastern, 16,350l.; for the London and South-Western, 11,843l.; for the South-Eastern, 17,600l.; and for the Brighton and South Coast, 4,000l. These losses are said to be due, in the main, not to the adoption of the principles of revision laid down in the Board of Trade report, but to the faulty working out of these principles in detail. The new schedules fail, it is said, to cover the ordinary competitive working charges now made by the railways, so far as these in most cases lie inside their Parliamentary powers. Sir Michael Hicks-Beach says in effect that he is willing to re-examine the processes and conclusions of the Board of Trade in the light of the representations made by the companies, but that the other side must equally have an opportunity to submit their views upon the points at issue. It will accordingly be necessary for the railway companies to submit their detailed proofs of absolute loss of revenue not only to the Board of Trade, but also to the traders concerned, so that the Board may run no risk of being unduly influenced by *ex parte* statements.



# Pharmaceutical Society of Great Britain

## OCTOBER EXAMINATIONS.

### LONDON.

THE Board of Examiners for England and Wales met at Galen Place, London, W.C., on October 15, 16, 17, 22, 23, and 24. For the

#### Major Examination

twelve candidates were examined, and five failed. The undermentioned passed, and have been registered as Pharmaceutical Chemists:—

Hazlitt, Harry Haworth, Bury	Shrubsole, Alfred, Chester
Hocking, Francis Almond, London	Pears, Harry W. K., Brighton
Shepherd, Wm. Fredk. J., Chester	Riding, William J., Ormskirk
Williams, William	George, Hirwain.

#### Minor Examination.

One hundred and sixty candidates were examined. Ninety-eight failed. The undermentioned passed, and have been registered as Chemists and Druggists:—

Allen, James, Wington	Griffin, James F., Birmingham
Ames, John Charles, Bath	Hoole, Herbert Edward, Sleaford
Anthooy, Thomas, St. Anstell	Hopkinson, Joe, Rishworth
Argles, Woodfield Henry, Aylesbury	Hulme, Thomas, Manchester
Atkinson, Joseph Andrew, Spilsby	Knott, Herbert, Bolton
Banke, Hervey Lowndes, Stockport	Knowles, Henry Percy, Birstall
Barrett, Allan Lifton, Hay	Lee, George West, Melton Mowbray
Beale, Harry Wilson, London	Lewis, Samuel Judd, London
Blissett, Francis Howman, Bristol	Lucas, Albert, Derby
Briggs, Alfred Henry, Blackburn	Mitchell, Walter Richard, London
Brown, Arthur M., West Malvern	Moir, William Sinclair, Aberdeen
Bygott, W. F., Barton-on-Humber	Pick, Alfred, Chester-le-Street
Care, Harry Bristow, London	Polley, Thomas Edgar, London
Charlesworth, H. H., Tunstall	Reay, John, Brampton
Cherrett, E. R., West Hartlepool	Richardson, Hubert N. B., Leicester
Churchyard, Arthur E. I., Norwich	Riding, John, Preston
Clarkson, Newtoo, Richmond	Robbins, Percy John, London
Cocker, Harris, Earlsheaton	Rollett, Harry, Lincoln
Coltman, William Thomas, York	Sewell, W. J., Barton-on-Humber
Crosland, William H., Darlington	Seymour, William Herbert, London
Dalton, Robert, Wilmslow	Sharland, William Cragg, Auckland
Darroll, George, Tbane	Spivey, Fred, Huddersfield
Davies, Evan Francis, Llanybyther	Stanley, John, Goolo
Davis, Joseph, Birmingham	Stockdale, R., Skipton-in-Craven
Day, William, Bull	Temple, Arthur W., Thrapston
Dean, T. H., Hemel Hempstead	Thomas, William W., Aberystwith
Drury, George John, Scarborough	Truscott, William H., Southampton
Edwards, Samuel, Godalming	Uren, Ernest Frederick, Hayle
Firmin, Harold James P., Bromley	Watson, Edward, London
Frowda, John James, Douglas	Watson, Edwin J., Birmingham
Grammer, Frank, Newark	Watson, James E. H., Norwich

#### Preliminary Examination.

The Board also received on the 24th the report of the College of Preceptors on the examination held on October 14. This showed that 308 candidates had presented themselves for examination, of whom 173 had failed. The following 135 passed, and have been registered as Apprentices or Students:—

Allan, Wm. Ditchburn, Dundee	Bray, Edwin John R., Saltash
Allen, Fred, Clevedon	Brice, Henry Doyle, Guernsey
Allen, John H. S., Leicester	Brown, Herbert, Blackpool
Andrews, Silas Fred, Chatham	Brown, Joseph Robert, Oakham
Appleton, George W., Attercliffe	Bryce, John, Glasgow
Ashby, C. E., Weston-super-Mare	Burnage, Wm. A., Newport (I.W.)
Ault, Percy, Mansfield	Busby, Henry Lewin, Harpenden
Bahn, James, Motherwell	Buttress, Henry J., Portsmouth
Ballingall, Andrew W., Glasgow	Camoron, Lewis, Aberdeen
Barrett, Charles H., Sydenham	Carmichael, Duncan, Aberdeen
Beddard, Wm. H., Wolverhampton	Carver, Ernest Wing, London
Bell, Arthur Henry, Mansfield	Collins, William Hugh, Narberth
Bell, Lillian Ambrose, Cambridge	Crofts, John Henry, Douglas
Bennett, Sidney Bailey, Widnes	Curtis, Arthur, Lowestoft
Billings, Sydney J., Cheltenham	Davidson, James, Keith
Boulton, Howard, Nottingham	Davies, Percy, Sheffield
Bowen, Edgar Cecil, London	Davis, Richard Llewellyn, Brecon

Day, Arthur, Boston	Monk, Alphonso T., Accrington
Dent, John, Manchester	Mortimer, Albert E., Liversedge
Duck, Frederick Edwin, Hull	Mullord, Charles, London
Dutton, Herbert G., Birkenhead	Mycroft, George Arthur, Sheffield
Edgar, Wm. Ernest, Southport	Newton, Francis Herbert, Salisbury
Ellis, Hugh Edward, Aberystwith	Nicholson, Thomas, Lancaster
Evans, Ralph James, Croydon	O'Brien, Edward, Dundee
Ferguson, William, Motherwell	Oliver, Joseph, Hull
Ferrier, James, Brechin	Parry, Lewis, Liverpool
Fidellia, Paul Louis, London	Payne, Roger, Saffron Walden
Fieldhouse, Willie, Bradford	Pitcher, Franklin, Ashford
Fisher, John William, Hugglescote	Pilkington, John, Jax., Buxton
Foster, Ernest Upsall, Horncastle	Plowman, Charles William, Malton
Fowles, Frederick Wm., Liverpool	Powell, William George, Bristol
Fulleylove, George E., Netherton	Pratt, Ernest, Leighton Buzzard
Gauld, James, Huntly	Priestley, Arthur Henry, Burnley
Gibson, George P., Buckie	Proctor, William, Turner, Morpeth
Haig, Wm. Nicolson, Edinburgh	Propert, William Todd, Forfar
Halford, Robert S., Birmingham	Purnell, Austin, Clevedon
Halley, Robert, Aberdeen	Rees, John Melbourne, Swansea
Hartness, John Benn, Chester	Robertson, Robert, Edinburgh
Harvey, William Whilton, Derby	Rogers, Frank, Petworth
Heddlie, J. S. B., South Ronaldshay	Scott, Philip, Anstruther
Heely, John, London	Shoel, John Paul Cock, Penzance
Hick, Wm. Henry H., London	Siminon, Albert Henry, Warminster
Hodges, Arthur James, Dover	Simon, Henry, Guernsey
Hodgson, John Birtwell, Blackburn	Simpson, Henry Sheffield, Leeds
Inns, Sydney W., Leighton Buzzard	Smith, Philip Sidney, Gainsborough
Irvine, James, York	Snow, Harris Charles, Malton
Izon, William, Worcester	Taylor, Arthur Frederick, Bradford
Jennings, Cornelius, Birmingham	Taylor, James Edward, Neath
Jesper, Charles F., Manchester	Thomas, Isaac Evans, Llandysul
Johnston, Robert, Longtown	Thomson, Thomas, Lerwick
Jones, Arthur Amos, Carnarvon	Topping, Walter, Platt Bridge
Jones, David Pryce, Chester	Trewin, Frederick T., Brandiscorner
Jones, Ivor J., Blaenau Festiniog	Tucker, Frederick V. G., Pembroke
Jones, Robert Griffith, London	Waddington, Frederick P., Bradford
Kirton, Amy Adeline, Birmingham	Waiowright, Percy, Castleford
Lane, Herbert, Princes Risborough	Walker, John Robert, Cockermonth
Lassasie, Laura Leonie de, London	Watson, Charles, Boston
Laurie, James Alexander, Montrose	Wells, Robert Joseph, Forest Gate
Littlefield, Robert Dexter, Ventnor	White, Gilbert, Litcham
Long, James Christmas, Boscombe	Wild, Charlie Collins, Manchester
McNaughton, David E. F., Dundee	Wilkes, Tom Wilmot, Ellesmere
Malins, Templar E., Newport (Mon.)	Willford, Harry Edwio, Thorne
Mayor, Joseph Challoner, Sheffield	Wilson, John Loehhead, Irvine
Mercer, James Anderton, Liverpool	Wishart, John, Insh
Michie, Lawrence P., Kinross	Wright, John Todd, Whitehaven
Millar, John, Port Glasgow	Wright, Wilfred Wadkin, Wakefield
Miller, Thomas, Berwick-on-Tweed	Wyatt, Frank L., Manchester
Milner, Jonah, Consett	

## Gazette.

### PARTNERSHIPS DISSOLVED.

Jepson, A., & Birt, S., Leamington Spa, dentists.

Rothwell, T., & Sons, Bolton, mineral-water manufacturers; so far as regards T. Rothwell.

Roughton, W., & Graves, H. T. (under the style of H. T. Graves & Co.), Gainsborough, soda-water and aerated-water manufacturers and bottlers.

Till, T. J., Whitehead, F., & Barlow, L. (under the style of the Manchester Crucible Company), Manchester.

### THE BANKRUPTCY ACT, 1883.

#### RECEIVING ORDERS, ADJUDICATIONS, &c.

Bignell, James William, Sandown, mineral-water manufacturer and lodging-house keeper.—R.O.—Adj.

Bown, John, Litcham, veterinary surgeon.—R.O.—Adj.

Maw, Solomon Gervas, Sheffield, manufacturing chemist.—R.O. Adj.

Moore, Harriette (trading as the Portmadoc Mineral Water Company). Portmadoc, late of Birkenhead and Borthygast, mineral-water manufacturer.—R.O.



## MANCHESTER DRUGGISTS AND THE PHARMACY BILL.

SPEECHES BY THE PRESIDENT OF THE PHARMACEUTICAL SOCIETY.

JUDGED either by the number of heads or by the representative character of the owners of the heads, the meeting addressed by Mr. Carteighe, on Tuesday afternoon, of the chemists and druggists of Manchester and the surrounding district, proved a great success. Some five hundred invitations had been sent out, and the gathering in response numbered close upon two hundred. The masonic-room of the Grand Hotel was well filled when the business was begun, and before the close of the two and a half hours over which the meeting extended every seat appeared to be occupied. Manchester and Salford, as was to have been expected, contributed the majority; but other towns in Lancashire and Cheshire were represented. The President had an attentive and appreciative hearing, although furtive glances at watches towards the close of his second speech suggested the idea that he was using too many words in his recital of a thrice-told tale. The warmest cheer of the afternoon fell to Mr. Kemp for his reference, emphasised by other speakers, to the necessity for dealing with the so-called bogus companies; but when it came to voting, Mr. Kemp and those who thought with him did not seem to care to submit an amendment, and a resolution in favour of the action of the Council of the Pharmaceutical Society was carried *nem. dis.*

Mr. F. Baden Bengier presided, with Mr. Carteighe on his right and Mr. George S. Woolley on his left.

The CHAIRMAN expressed regret that Mr. W. S. Brown, the President of the Manchester Pharmaceutical Association, was prevented by illness from occupying the chair, and made graceful allusion to the interest Mr. Brown had always taken in everything which had for its object the advancement of pharmacy and the welfare of pharmacists. His duty in taking the chair, Mr. Bengier proceeded to remark, was a very simple and pleasant one. He had not to unveil a portrait of the President of the Pharmaceutical Society, as was lately done in London, but the man himself; and, of all men in this country, there was no one who stood less in need of an introduction to an audience composed of pharmacists than did Mr. Carteighe. He might add that there was no man who deserved to be listened to with more attention and respect when he spoke, as he was about to do, on matters to which he had given attention all his life. Mr. Carteighe had never sought to achieve a cheap popularity by trying to please everybody, but had acted on his own convictions, and had always shown the courage of his opinions. (Hear, hear.) When Mr. Carteighe had finished speaking he would be glad to hear and to reply to any observations which anybody desired to make.

Mr. CARTEIGHE, who was well received, said he thought it would be well to confine his observations in the first place to the draft of the Bill, and then he would be ready and willing, and even delighted, to take part in any discussion which might follow on other subjects affecting the trade. He had not come there to ask them to support the Bill, or the draft of it, but simply to explain its provisions, and if he spoke warmly, or firmly, or emphatically, he would have them understand that he wanted them to feel the full force of his views, and the views of the Council which he represented. He hoped he would be credited with representing the feelings of the Council in the matter, although in a body of twenty-one gentlemen there were naturally differences of opinion as to the extent they should go in asking for increased powers. He claimed for the Bill, as he has claimed before, that it is a modest measure in many respects, and that the framers of it had proceeded on the belief that it was better to make tolerably sure of half a loaf than to seek for a whole loaf and get nothing. In some detail Mr. Carteighe proceeded to describe the position of chemists and druggists before and after the passing of the Act of

1868, and by quotations from and explanations of the clauses of the draft Bill endeavoured to show how the measure, by raising the educational standard, would keep the trade clear of incompetent men, and of those broken-down unqualified chemists and druggists and of those broken-down unqualified medical men who were at present the pirates of the trade. He also dwelt on the importance of the clause which has for its object the consolidation of the Pharmaceutical Society, and the clause, which he said was perhaps the most important clause in the Bill, in which the privilege of compounding medical prescriptions is sought. In conclusion, he spoke of the folly of drafting Bills which they could not hope to have passed. He was a good hand at drafting Bills, he said, and he could draft a Bill which would give satisfaction to everybody present, but what was the good of throwing dust in their eyes? In Lancashire, at least, they would not stand that sort of thing, whatever people might do in the South. They would say at once to him, as an Irishman, "Blarney, Mr. President—it won't do!" (Laughter.) In framing a Bill which would meet the just aspirations of the trade, the Council had had to consider the forces opposing them in and out of Parliament; and he repeated what he had said on a previous occasion, that the omissions in the Bill were omissions deliberately made. He appealed to them to rally to the support of the Society. If those whom he was addressing showed themselves able and willing to join in the movement, then there was a chance that they might be successful with the measure, there was a chance that they might improve it in going through Parliament, and there was a chance that they might get something more later on; but if they stood by apathetically waiting until the Pharmaceutical Society, in the face of opposition, obtained a monopoly for the drug-trade, they would have to wait till doomsday. He submitted to them that the Bill which was proposed was for the benefit of the trade at large. (Applause.)

The CHAIRMAN, while inviting discussion, said that the applause with which the meeting had received Mr. Carteighe's explanation indicated the pleasure with which they had listened to him.

Mr. PHILLIPS (Wigan) moved the following resolution:—

That this meeting approves of the proposed Pharmacy Act Amendment Bill, and is of opinion that the Council of the Pharmaceutical Society deserves the support of the entire trade in its efforts to promote further legislation in the interests of pharmacy.

He had been very much interested in the subject of the Pharmacy Bill, and felt sure that no one who had not read the discussions which had taken place in the Council of the Pharmaceutical Society could be aware of the difficulties which its drafting had involved. He believed if passed by Parliament it would be of immense benefit to the trade at large. The fact had long been recognised that it would be useless to ask the Legislature for anything which would be solely for the benefit of chemists; they must show that what they asked for would prove of public advantage, and experience led him to agree with the President that it was best not to touch anything in the Bill or introduce anything which would obstruct its progress. (Hear.) He asked the meeting to give the Society its hearty support by passing the resolution. (Applause.)

Mr. JAMES HART (Manchester), in seconding the resolution, said that no one could do so with greater pleasure than he did. The statement they had heard from Mr. Carteighe had been extremely lucid and satisfactory. After all, what was sought by the proposed Act was no very terrible thing. The Society, as a society, had not much to gain by it—no doubt they had some little, but the great gainers would be the general body of the trade. (Hear.) Mr. Carteighe had told them of men being in the trade who were "examined," but not "educated." These men, in his (Mr. Hart's) opinion, were the curse of the trade—men to whom a physician could not, with any degree of confidence, recommend his client to go; men who were incapable of forming any intelligent or independent opinion of the quality of the drugs with which they dealt. The great aim of the young man of to-day was to get through with as little trouble as possible; but it did not follow that because a piece of furniture had a coating of veneer, the furniture itself was made of solid walnut or mahogany. (Hear, hear.) To his mind, the education clause in



the Bill scarcely went far enough. He should like to see the Major examination alone made the qualifying examination. It did not follow that that was to be necessarily the highest examination; it would be easy to establish a higher one for those who wished for something higher. Then, as to the proposed by-laws, he did not think there was anything very terrible. The Council could not pass anything without the consent of the members, and if those engaged in the trade were not members, the fault was their own. He wished them to bear in mind this fact—an opportunity was now presented, which might not occur again for many years, of obtaining this important advantage of a complete consolidation of the whole trade. The great successes of trades unions had not been achieved by the efforts of individuals; they had been brought about by combined effort. Where the members of a trade were divided they could accomplish little. Again, he hailed with satisfaction the proposal that every man who had passed the examination should be eligible for membership of the Pharmaceutical Society. What they wanted was to get members of the trade to join them, to show an intelligent interest in the Society's work, and not to sit grumbling at home because things do not go exactly as they wish. (Hear.) One thing they had to complain of, and which could not be too strongly condemned, was apathy on the part of the trade. They must get rid of that; if they did, the trade had a future before it which would be satisfactory to everyone. He had great pleasure in seconding the resolution.

Mr. COOPER (Macclesfield), asked whether, considering the great educational facilities of Manchester and the surrounding towns, it would not be possible to hold qualifying examinations in this city.

Mr. CLARKE (Altrincham) complained of the lack of interest shown by some members of the trade in questions so closely affecting their interests. It was, he urged, necessary for them to be united, and to bring their influence to bear on members of Parliament. As to the proposed Bill, he had ideas of his own, and was prepared to have advanced them, but, after the explanations of the President of the Pharmaceutical Society, he was quite content to leave the whole matter in the hands of the Council. (Hear, hear.)

Mr. H. KEMP (Manchester) said that, whilst giving the worthy President and Council every credit for doing their best, he, at the same time, must confess that he had not yet heard or read anything which convinced him that something might not be done to prevent bogus companies from evading the law. (Cheers.) He did not believe there could be found, in either branch of the Legislature, a man so devoid of common sense as to justify the evasion of any law. (Hear, hear.) It was the law of this country that no man, unless he was qualified, should sell poisons or dispense prescriptions containing poisons; yet it was permissible for seven men to do this by simply forming themselves into a limited company. If it was illegal for these men, as individuals, to carry on the business of chemist and druggist, and to call themselves chemists and druggists, there was nothing either in law or equity which could justify them in combining to set aside the law. (Cheers.) It has been admitted—indeed, it was stated by the law lords in the memorable case of the Pharmaceutical Society against the co-operative store—that it was an oversight on the part of the framers of the Act of 1868 that the word "person" was not made to include the plural. (Hear, hear.) If that was so, the omission having been unintentional, surely any new Bill dealing with and amending the Pharmacy Act, ought to supply that omission. (Hear, hear.) Except on this point, on which he thought the Bill of the Pharmaceutical Society was deficient, he was quite at one with the Council, and could wish to see their Bill become law before another twelve months had expired. He should prefer that the meeting, whilst approving of the Bill, should urge upon the Pharmaceutical Society the desirability of adding to it a clause to remedy the omission which he had pointed out. (Cheers.)

Mr. J. RYMER YOUNG (Warrington) said that Mr. Carteighe had anticipated the objection of the last speaker by stating that there were many things which might have been included in the Bill, and would have given satisfaction to the trade, but which were impracticable. (Hear, hear.) He himself confessed to some feeling of disappointment. As it stood the Bill was nothing more nor less than a curriculum Bill, and though he should on all occasions support such a Bill, he thought they might anticipate that

it would be received by the trade with a considerable amount of apathy, and even of distrust. Nevertheless they would do well to support it if for nothing else but because it aimed at the establishment of a better state of education. It was a step in the right direction, and those who, like himself, had had a little to do with apprentices must have been struck with the appalling ignorance and the stupendous foolishness of people rushing into the trade almost destitute of any early education. (Hear, hear.) The President had shown the meeting very clearly that he thoroughly represented the Pharmaceutical Council. There could be no doubt that that Council efficiently represented the Pharmaceutical Society, but whether the Pharmaceutical Society represented the members of the trade was altogether another question. Mr. Carteighe had admitted that there was an enormous opposition outside their ranks, which was capable of paralysing any legislation the Society might attempt. That was an admission which strengthened what he said—that, as a matter of necessity, no one outside their ranks had any right to interfere with what that Society was doing, any more than members of that Society had a right to criticise the by-laws of any club with which they were not connected. If members of the trade were so apathetic that they would not go to the extent of subscribing a few shillings a year in order to have a vote, they were out of court altogether. (Hear, hear.) What could they do with a community of that kind? Nevertheless, if not from necessity, surely it would be wise as a matter of propriety, for the Council to do something. If the crowd outside would not come in of their own accord, it would be well for the Society to do something to attract them. He was not prepared to denounce the Society in the style which was common. He was certain that little more could be done in the way of legislation for the promotion of trade interests than had already been done. He quite saw, as Mr. Carteighe saw, that to go to Parliament for an Act to further their trade interests would be futile. Still there were minor details. It was understood that the Society already possessed powers which it failed to enforce. There was the old question of the sale of patent medicines. (Hear, hear.) It seemed a gross anomaly, which never could have been anticipated by any legislative body, that it should be illegal for an unqualified person to sell two-pennyworth of laudanum, and yet that it should be legal for a grocer to sell over the counter a 2s. 9d. bottle of chlorodyne. (Hear, hear.) He had nothing further to remark except that, in his judgment, there would be less apathy and more sympathy on the part of the trade if the Society utilised such powers as it possessed. There was one power—that with reference to unqualified assistants; he would push that to the bitter end. (Hear, hear.) At the same time, he did not believe that any good would result to the trade from harassing and finding fault with the actions of a set of men who he believed were doing their best to gauge the requirements of the trade. (Cheers.)

Mr. TAYLOR (Bolton) said he felt so much interest in the questions before the meeting that he felt bound to say a word. He had always been in favour of the curriculum. The man was best qualified to fight the battle of life who was best educated. The present was an age of education, and as a society they could not do a better thing for their trade than insist that those entering it should be educated up to the level of the age. The effect would be for good both to themselves and to outsiders. (Hear, hear.) He agreed with all that had been said as to the necessity of united action. He had had something to do with the promoting of Bills in Parliament, and he knew what influence a comparatively small body of men, working unitedly, could bring to bear upon members. He knew also, from his small experience, how inadvisable it was to overload a Bill—to ask Parliament for more than there was a reasonable chance of their getting; they must, in fact, be prepared to take the half-loaf rather than go without bread. That, however, was no reason why they should not shout for the whole loaf. (Hear, hear.) He believed they had justice and right on their side in demanding that seven men should not be allowed to do that collectively which it would be illegal for them to do individually—(hear, hear)—and he believed this, too, that if they compelled the public to listen to them, it would admit the justice of their claim, and sooner or later Parliament would grant that claim. (Hear, hear.) The President's



opinion, they must allow, was of more weight than their own; but he thought they might urge upon the Council that possibly they might do a large amount of good by the insertion of a clause in their Bill remedying that which was admitted to be an error in the Act of 1868. It might be withdrawn if, when their Bill came before Parliament, its presence was found to imperil the passing of the measure. There was no more *à priori* likelihood of the Bill being wrecked on that clause than there was of its being wrecked on the compounding clause. In either case they would take the wind out of the sails of illegal competitors. They had a right to ask Parliament, which had imposed on the trade great responsibility, to protect them in the exercise of that responsibility; and, though it might turn to them a deaf ear at first, they would, by persistence, eventually get that which they wanted. He would even be glad to see the curriculum and compounding clauses put off for a year or two, in order that they might the more effectually press for that measure of justice which was so urgently needed in regard to the bogus companies. They might well recommend the President to lay this matter before his colleagues on the Council. As an incentive he referred to the success which had attended the efforts of the cyclists to obtain from Parliament the enactment of laws and regulations which were accepted on all hands as equitable and proper. They might by united action—but only by united action—obtain an equal measure of justice for the trade they represented. (Applause.)

Mr. CARTEIGHE was then invited to reply. He said he was very pleased those present had spoken out. He did not come to Manchester to butter or to be buttered. He only came to confer with them as men of sound common-sense, and he had only stated his views at the length he had done because he felt that he was in a better position than some of them to know what was within the range of practical politics. With regard to the observations of Mr. Phillips and Mr. Hart, it was, perhaps, not necessary he should say anything. He had been a little disappointed with the remarks of Mr. Taylor. Mr. Taylor had spoken about the importance of consolidation, and he illustrated his remarks by reference to what had been done by a club of cyclists, only he had forgotten to point out that it was first necessary for all the cyclists to join a club or union and to pay a subscription. Members of the trade asked the Pharmaceutical Society to get something for them without their joining the body—they wished to be led by generals to whom they would not give soldiers. That was the fundamental error. Let the Society get the united support of the trade, and they could go forward with confidence; but the trade said, "No, get what we want, and then we will join you." (Hear, hear.) Was not that so?

Mr. BOWDEN (Patricroft): It is a fair statement, I think.

Mr. CARTEIGHE said he congratulated Mr. Taylor on his excellent speech, but he thought it was deficient in logic.

Mr. TAYLOR explained that what he said was that, if anything had to be done, members of the trade, whether in or out of the Society, must help.

Mr. CARTEIGHE: Quite so; but they did not help. They found, unfortunately, that those who were not for them were against them. They did not do the Society the honour of speaking of them as frankly and with as sterling good sense as Mr. Taylor had done. It was the first time—the very first time—that he had heard anyone not in the Society speak as Mr. Taylor had spoken. That was all he asked for—the support of members of the trade, whether in the Society or not. He wanted local secretaries in various parts of the country, or men who thought as Mr. Taylor thought, whom it would be possible to call upon to take action on twenty-four hours' notice. He wanted voluntary combination, for their good and for the good of the trade, and men said they would not come in. (Hear, hear.) They all knew what could be done in a town in regard to trade matters if every chemist belonged to a local association. They did not want Parliament to come in and affect prices if only they were unanimous in a town. And it would be admitted that there was such a thing as unfair and unjust competition which did not come from companies. (Hear, hear.) If they could gather together the whole of the chemists and druggists of the country into a voluntary combination, more good would be done to the individual chemist and druggist than any Act of Par-

liament could confer. The weekly subscription to the Pharmaceutical Society was not greater than a very large number of working-men in this country voluntarily rendered for the defence of their own interests, and he submitted to them that from that point of view there was no cause for feeling aloof. He submitted to them that if the Pharmaceutical Society had not done as much as it ought to have done in the past, or was not now doing as much as it ought to be doing, responsibility rested upon the members of the trade themselves. With reference to Mr. Cooper's question, the opinion of the Council was that if they get power to divide the examination, parts of the examination should be conducted at places like Manchester, and reserve the further parts to be taken at London or Edinburgh. But, of course, any proposal of that kind could be modified according to circumstances and convenience. Their object would be to give apprentices, after they had passed their Preliminary, a stimulus to work, and let them go to centres and pass a portion of their qualifying examination, and so reduce the total amount of work to be done. In that way the interest of the apprentices would be sustained the whole time. With regard to Mr. Kemp's observations and Mr. Taylor's with regard to companies, he would like to say that there was a great deal more in that question than many of them knew. The Council had often been accused of not telling the whole difficulties that besetted legislation on this subject. If they had not always told what they knew, it was because they had not hitherto been disposed to advertise facilities for competitors in their own trade. They had information and opinions years ago not differing from what they had now with regard to these companies. Well, he was going to put a proposal to them. Was it equitable, was it just, for seven executors or trustees of the widow of a deceased druggist to keep open shop?

Mr. KEMP: No, sir.

Mr. CARTEIGHE said Mr. Kemp was logical, and personally he agreed with him. He opposed that provision in the Act of 1868 as striking at the root of the main principle of the Bill. He held that when a qualified man died, his business should be carried on by a qualified successor. He was bound to tell them, however, that the popularity amongst the trade at large of this power to leave the business to a widow was so great that it was hopeless to argue on the subject. And, if that clause was retained, what was the difference in the security to the public between that and companies? ("None.") Well, that was his answer. When the drug-trade said they would forego that clause, then they could proceed with legislation for companies. In connection with some previous Bills it had been suggested that three years should be the ultimate limit of time during which the business of a deceased chemist could be carried on, as allowed by the Act, but the answer had always been, "You must not touch the clause." The moment you talked to a chemist and druggist about the widow, he lost all his logic. (Laughter.) All through the ranks those who complained most about the companies were the first to defend the clause relating to the widow. He held, then, that it was no good going to Parliament unless they were prepared to say that no person should leave his business to an unqualified widow in the guise of trustees or otherwise. Was not that logical? The case to which Mr. Kemp had referred was lost by the Pharmaceutical Society because of that very clause.

Mr. KEMP was understood to say that he agreed with Mr. Carteighe so far, but he thought there was no reason why the suggested clause should not be inserted.

Mr. CARTEIGHE said he would further remind the meeting that when the judgment was given to which reference had been made, it was not said that the word in the Act involved an oversight, as Mr. Kemp had suggested. We had concocted the idea of an oversight to fit in with our particular theories. What Lord Selborne said was that in that case a qualified person handed over the poison; he was a registered chemist and druggist, and consequently he would give judgment against the Society. Lord Selborne said (speaking from memory):—"I should have had difficulty in coming to this conclusion if I thought the public were in the slightest danger from the result of our judgment. In this case it seems to me they are not." The person who handed over the drug for the corporation was the seller. The mischief caused by that clause was now deep rooted;



the public had taken hold of it, and when a Bill was drafted to deal with such corporations the Government would not accept it. If they would look at the temper of the times, at the interests which members of Parliament had in such stores—

Mr. BOWDEN: You are coming to it now.

Mr. CARTEIGHE: If they looked at the matter all round, with special reference to the widows' clause, they would see that there was some difficulty. There was, as they knew, a time when they had some doubt as to whether they could hit a man who sold for a corporation if not qualified, but they had recently been going against some of those unqualified sellers, and making them pay penalties. Many of these cases had not been reported. They had the power now of insisting that in a bogus company nobody but a qualified man should sell poisons. The spirit of the age was in combination, but he thought the Companies Act was never intended to be used as it was. It seemed absurd that seven persons should be able to register themselves as a corporation. But the same thing was experienced in other trades and professions. The dentists and the veterinary surgeons, for example, complained in the same way as druggists. "Dental associations, limited," were doing the same thing as the corporations of which they complained. The present Lord Chancellor, he might tell them, said that in seeking to have the Companies Act amended so as to prevent this abuse, they had not the slightest chance of being listened to in the present state of public opinion. If that was said to them by a friend, what could they expect from others? Well, but it might be said, Why not try and see what could be done. His answer to that was that he could not try unless he had their powerful help. It was necessary he should speak plainly on the point. He was not deficient in pluck, but he could not face what they asked him to do, nor could his colleagues, unless the whole trade of the country was at their back, and unless the members of the trade would assist in all parts of the country in bringing influence to bear on members of Parliament, and in working the Bill in the same way as they would an ordinary political Bill. Mr. Harrison, it might have been observed, pressed the question of title, and suggested the desirability of companies being prevented from using the title "chemist and druggist." He (Mr. Carteighe) had happened to make the observation that it was not worth while to deal with the title if they could not deal with the sale, and the Council had been told in very unmeasured terms that they did not care for the title. But the fact was that they could not get anybody to convict for the use of the title "ohemist and druggist" unless at the same time the person complained against sold poison. Obviously, if they could not prevent corporations from selling poisons, they could not prevent them from using the title. The two things hung together. The Council therefore thought it useless to prevent the use of the title where they could not prevent sale. With regard to patent medicines, he quite concurred in the opinion that the Pharmaceutical Society should exercise all the powers it had, but he hoped Mr. Young would be good enough to leave the question for a little while. It was all very well to say that they had got the power, but it was surely desirable to exercise the power under such conditions as to ensure absolute success. If they tried to enforce their powers and failed, they would do themselves tremendous harm. On behalf of the Council, he asked them to be patient. They were waiting for a suitable opportunity. Remember that if they failed the very objectionable result would come to pass that the grocer would be allowed to sell these poisonous patent medicines, notwithstanding the fact that they were labelled "poison," and they would thus have a sort of intimation conveyed to the public that there were two sets of people who could sell poisons—one being the chemists and the other the grocers, and he did not think that would be to the advantage of the trade. (Hear, hear.) In his opinion it was the law that every patent medicine containing a poison must have the word "poison" put outside. In the Matthias case that view of the matter was upheld. He reminded them, however, that in such a matter the Pharmaceutical Society was not the only prosecuting body. A prosecution could be initiated by any member of the trade before an ordinary police magistrate. The Council had not hitherto thought it desirable to attack people on the question of labelling, as

they regarded it as a public safeguard, and thought it should be dealt with by public officials. There was no doubt that the seller could be compelled to label, but there was a doubt as to whether you could restrict the sale to the qualified man, and he hoped the Council would not be pressed to fight until they saw they had the conditions in their favour. Mr. Carteighe concluded with an appeal to the members of the trade to arouse from their lethargy. How was it possible, he asked, for generals to lead to victory if they had no soldiers behind them? (Applause.)

The motion proposed by Mr. Phillips was then put to the meeting and carried unanimously, amidst applause.

A vote of thanks to Mr. Carteighe for his presence and address, accorded on the motion of Mr. GEORGE S. WOOLLEY, seconded by Mr. T. KAY (Stockport), brought the meeting to a close.

#### MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

THE session of the Midland Counties Chemists' Association was opened on Tuesday night with a conversazione at the Midland Hotel, New Street, Birmingham, at which the President (Mr. A. Sonthall) delivered his inaugural address. There was the largest attendance, including a number of ladies, that can be recorded in the history of the association, and the programme was carried through most successfully. The arrangements were in charge of the hon. secretary, Mr. F. H. Alcock, who spared no effort to secure the enjoyment of the guests.

#### THE PRESIDENT'S ADDRESS.

The President, who, on rising to deliver his address, was received with applause, said:—It is usually expected that the President shall give you some review of the past, and I propose saying something about the events of the last twelve months. In pharmaceutical politics several perhaps in themselves small circumstances seem to indicate a prospect of greater activity. Although we must not expect any legislative measures to be in any sense a panacea for all the ills to which pharmacy is heir, still we may confidently look forward to a considerable enlargement of our privileges if the Pharmacy Bill just now adopted by the Council should become law, and on that account it behoves all pharmacists to work with a will for the furtherance of that measure. With your permission I will briefly scan some of the provisions of this proposed Act, which will, I think, enable us to obtain some idea of its value, but I should be sorry if this brief sketch should serve to prevent any of my hearers from carefully studying the provisions of the Act for themselves.

After at some length expounding the clauses of the Bill and advocating the curriculum and the other proposals of the Council, Mr. Sonthall said: I now want to call your attention to the proposal of Mr. Harrison. In very eloquent language he urged the Council to have a clause added to the Bill to prevent the starting of fresh stores, or limited liability companies, but at the same time to legalise those now existing. For my part, I can hardly believe the Legislature would thus put a stamp of legality on what is acknowledged by all to be a way of evading the law, and depriving the public of that security which they have a right to expect from a proprietor of a business. I cannot believe such a clause would pass—but if it did, it would certainly do us much harm—and while urging you to give your hearty support to the Bill as brought in by the Council, I would ask you to oppose heartily this suggested addition. Our Irish brethren have succeeded in obtaining their Bill—not exactly what they wanted, but what our rulers thought was good for them: why should not we be equally successful? (Applause.)

This year we have, for the first time in our history, been requested by the Medical Council to assist them in preparing the Pharmacopœia addendum. This is certainly a step in the right direction. Hitherto we have been completely ignored: now, thanks to our better education, we are requested to consider with them the best modes of preparing and exhibiting medicines for the prescriber's use. It may be we have some of us long considered we were fit for this work, but now it is acknowledged by others that we are



No doubt the establishment of our research laboratories, and the general advance of pharmaceutical energy which has been going on steadily during the last few years, have materially contributed to this recognition. The work of the medical profession is so closely interwoven with that of pharmacy that it is of the utmost importance that the two should go on harmoniously and on parallel lines without any mutual friction. Such matters as the Pharmacopœia addendum tend in no small degree to this mutual harmony which is both advantageous to the professions and the public good. If we can but row well together I feel sure there are few things which we shall be unable to obtain either in politics or elsewhere; and gradually, but none the less surely, the mutual jealousies now existing on account of the prescribing of chemists and the dispensing of surgeons will cease to exist, because the causes will be removed by tacit agreement. (Hear, hear.) I now pass to the consideration of some trade subjects of interest to pharmacists. A large quantity of methylated spirit is sold by chemists. In some parts of the country, we are told, the poorer classes use it as a cheap drink to a great extent. With a view of putting a stop to this bad and dangerous practice the Inland Revenue proposed to prohibit all small sales and to compel chemists and others to keep it put up in quart bottles, allowing it to be sold only in this form. The Pharmaceutical Society here did good service: we instructed our President to see the authorities and show them how useless such an arrangement was; the sale of reputed quart bottles at 10*d.* each would not prevent drinking, and, on the other hand, such a quantity would often be unnecessarily large for domestic purposes and would but hamper a legitimate and useful trade. You will remember that our capable and eloquent President was eminently successful. The authorities were convinced of the uselessness of their proposed action, and we have still the sale of methylated spirit instead of it having become a bottle-trade and so passed into the hands of the stores, limited companies and publicans.

We now come to a subject which is of some importance and in which we are at the present time liable to be much hampered. Since the early part of last year, when a Bradford chemist was fined for the sale of beef-wine, numerous communications appeared in the trade journals respecting the position of chemists with regard to the wine licence. As the law at present stands there is no doubt that the medicated wines sold by pharmacists must be so far medicated as to be too unpleasant or too dangerous to be used as beverages or simple stimulants, otherwise they would be obliged to take out a wine licence. He therefore has two courses left open to him—either to render his wine sufficiently unpleasant, or take out a licence. The wines of the British Pharmacopœia, except orange and sherry, may safely be considered without the scope of a wine licence, while pepsin and coca wines have been specially exempted from the law under certain restrictions as to strength laid down by the Inland Revenue Department. Pepsin wine must contain not less than 2*l.* drs. of strong hydrochloric acid and 320 grains of pepsin per pint, and coca wine is to be prepared from the leaves, and contain not less than  $\frac{1}{2}$  grain cocaine per fluid ounce.

There can be no question that the proper position for the pharmacist to assume is that of selling true medicinal wines only. Unquestionably a great deal of the so-called coca, beef, and other advertised wines is nothing more than wine with a suspicion of medicinal value, and is bought chiefly for surreptitious tipping. Assisting such practices as this (I speak now altogether apart from my known connection with the temperance cause) is surely dishonouring to a class of professional or business men who profess to be seeking the good of the public by supplying them with medicines to heal their sicknesses, under which category it is hard to place the tipple of those who are too weak to resist the covering of so-called medicine. To take action on these lines of course means inability to sell many of the popular advertised wines, but surely the chemists of to-day ought to have burnt their fingers enough over the proprietary medicine trade to prevent them from doing the same over proprietary wines of doubtful medicinal value.

During the past year a few new drugs have either come into use or have greatly extended their popularity; amongst these are aristol, chloralamide, exalgine, phenacetin, pyoktanin, and sulphonal, which seem likely to take a permanent

place on our shelves. These have been introduced by German, not English, chemists—in fact, we have to look to Germany or France for almost every advance in the direction of new remedies. This is undoubtedly due to their admirable laboratories and excellent scientific education so far in advance of our own. Surely it is time we shook off this disgrace, and once more took our position in the van of chemical research.

The constitution of these bodies was ably discussed by Mr. Hodgkin at the recent meeting of the British Pharmaceutical Conference; I need, therefore, not enlarge on that point. I would, however, very briefly indicate the properties and uses of these new remedies.

**ARISTOL**.—This substance has been recommended as a substitute for iodoform. It is prepared by the action of an aqueous solution of iodine and iodide of potassium upon thymol in alkaline solution. It occurs as a pale orange-brown powder, insoluble in water or glycerine, slightly soluble in alcohol, readily in ether and fixed oils. It must be protected from light and not heated, or decomposition will set in. It is almost odourless, smelling faintly of thymol, and does not stain the skin. It has been reported upon by numerous German physicians, and the general conclusions seem to be that it is a most useful remedy in all cases in which iodoform may be employed, is perfectly harmless, and is not so irritating as many other remedies for skin-diseases. It is used either as a dusting-powder, as an ointment (3 to 10 per cent.), or dissolved in collodion (10 per cent.).

**CHLORALAMIDE**.—This compound, although not new, has come more extensively into use during this year. It occurs in colourless crystals, soluble in about 14 parts of water—more soluble in spirit—possessing a slightly bitter taste, but without the acidity of chloral, to which it is nearly allied. It should not be dispensed in conjunction with alkaline hydrates, carbonates, or bicarbonates, all of which decompose it; nor should its solution be warmed to 120° F. for the same reason. It has proved to be a valuable hypnotic in general insomnia and restlessness, when not accompanied by great pain, without causing congestion of the head, or affecting the heart's action or digestion. It has been found of great value in the insomnia of old age. Dose: 20 to 40 grains in solution.

**EXALGINE** (syn. METHYLACETANILIDE).—This is a most valuable analgesic. It has been brought into prominence by Professor Fraser, who has found it of great value in neuralgic affections—such as facial neuralgia, sciatica, cardiac angina, &c. It is not a hypnotic—at least, in small doses—and is free from the disagreeable after-effects of most other analgesics. Some experimenters have described cases in which symptoms of collapse have occurred; this is most probably due to impure material. It occurs in needle-shaped crystals, slightly soluble in water, more so in boiling water, and freely in rectified spirit or dilute alcohol. It melts at 212° to 214° F. Dose:  $\frac{1}{2}$  to 3 grains dissolved in weak spirit, or as a granular effervescent salt.

**PHENACETIN**.—This compound occurs in small, white, crystalline plates without taste or smell, insoluble in water, soluble in spirit. It is a valuable antipyretic, and analgesic, similar to antipyrin, producing perspiration, but entirely free from cyanosis, collapse, and other evil consequences. It may be employed in febrile conditions generally, and has been proved very serviceable in neuralgia and la grippe. Dose:  $\frac{2}{10}$  grain in powder, or as a granular effervescent salt. Methyl-phenacetin, corresponding to methylacetanilide or exalgine will probably shortly come into use as an analgesic.

**PYOKTANIN**.—This is an aniline dye, which has been introduced as a most remarkable antiseptic and disinfectant. Two kinds have been described, a blue and yellow variety; both dyes are readily fixed by bacteria, which thereby lose their activity, and are destroyed. Pyoktanin has been employed as a dusting-powder ( $\frac{1}{10}$  per cent. and 2 per cent.), ointment (2 per cent.), and solution (1 per cent. and  $\frac{1}{10}$  per cent.), in ulcers, purulent wounds, and in several ophthalmic diseases, &c., with the happiest results; it is also used in general surgery in the form of pyoktanin gauze and other dressings (1 in 1,000). The various preparations stain the fingers of the operator, and the tissues to which they are applied, but these stains are readily removed by alcohol or binoxalate of potassium; this very fact has the advantage of



indicating the extent to which the antiseptic has permeated the surface requiring treatment. The stains on the eye rapidly fade without any application.

**SULPHONAL.**—A great revival has occurred in the use of this valuable hypnotic. It occurs in colourless, odourless, nearly tasteless, crystals, or as a crystalline powder, very slightly soluble in cold water, more so in hot water, readily in ether and hot spirit, less soluble in cold alcohol. It melts at 258° F. Sulphonal has proved of great value as a hypnotic in nervous and general insomnia; it produces no disagreeable after-effects, not affecting the heart or digestive organs. It is best given in very fine powder, as pointed out by Mr. Boa, either alone or suspended in syrup liquids, as its practical insolubility enables it to pass through the system unchanged when in coarse powder. This fact probably explains some of the adverse criticisms which appeared when it was first introduced into this country. It should be taken about two hours before bedtime, when it will almost invariably produce sound and tranquil sleep for from five to eight hours. Dose, 20 to 40 or even 60 grains.

When next any of you visit London I would recommend you to pay our London home a visit. I think you will acknowledge that 17 Bloomsbury Square is a place of great interest to the pharmacist, and altogether a very creditable establishment. Those of you who knew the place in former days will be interested in the improvements of the last few years—those improvements on which we have been spending some of our savings. The two houses next No. 17 have been rebuilt this year. The one is let as a private house; in the other we have placed our offices on the ground floor; on the first floor we have a new council chamber, larger and better ventilated than the old one. Doubtless the increased air and space will bear fruit in the wiser and more efficient work of our councillors. The other rooms are used for committees. These improvements have given space in the old premises, which has been adapted for other purposes; our old council chamber now forms part of the library, which had long ago grown too large for its location. Then, too, the recent improvements in the premises in Pied Bull Yard have provided us with a magnificent examination hall, research laboratories, and a less elaborate laboratory for practical pharmacy. At present our library and museum are such as to kindle a flame of honest pride in the minds of those who may justly consider themselves as part of the Pharmaceutical Society. I think we may say that a good deal has been done during the past year, but much more might have been done had the chemists in the country been united. The cry always is that the Pharmaceutical Society is no good—not worth supporting: it never takes up trade matters, and so the larger portion of chemists keep themselves aloof from the Society. The late Trade Association was supported no better and allowed to die. Many chemists wish it was alive again, but it is no good crying over the past. What can we do for the future? Anything we like if we are only united. If we can show our M.P.s that we really want help to enable us to carry out the law of the land, we shall obtain it. Now we are told that the Council do not represent the trade, and the result is that our Bill is opposed by a number of chemists; if the proposed Bill were supported by the trade generally it would pass, and would give us much power which we do not at present possess—power that would be of the very greatest advantage to us. Birmingham, although its motto is “forward,” is no more united in aiding pharmaceutical politics than the rest of the country. As a local association, we often have good meetings, but our young men do not take the interest and active part in them they might. They do not read papers, nor do they assist us to form classes. Our proposed Bill will not do everything for us: we must be willing ourselves to work, and that energetically and unitedly. (Applause.)

Mr. W. H. PULLIN moved a vote of thanks to the President for his address. He said he thought the resumé he had given of what had taken place during the past year was a very able one, and would be of great value to pharmacists. (Hear, hear.) They were too apt to forget everything but that which was occurring at the moment. The references the President had made to their want of unity were very forcible. At present, pharmacists were certainly not united. Combination seemed to be the order of the day—it was undoubtedly very potent against them—and when they saw

what it could do, surely they had but to use their common sense to recognise that in applying it to their own interests they would obtain a far better position, a far greater voice in the management of their own affairs, and a far better opportunity of going to the Government and saying: “Our education and our liability entitle us to a far better position than that which we at present hold.” (Hear, hear.) They had any number of disabilities, but so far as he could see very few advantages. There was one thing he thought they should not forget and that was that the Acts of Parliament which had already been passed had done them a great deal of good. The Act of 1852 first combined pharmacists together, and gave them a footing. Then came the proposed Act of 1868, which, if it had been passed, would have been most valuable to them. But why was it not passed? Simply from the absurdity of some of the members of the trade, who really prevented it becoming what it should have been, and the result was that it dwindled down into a Poisons Act, which had put upon them a great amount of disability and given them very little compensation. He hoped, therefore, that as a body they would see the advantage of greater unity and enthusiasm. He should like to see all the local associations taking in members to the Pharmaceutical Society. If they persuaded pharmacists to join—not with the expectation of getting any immediate advantage, but on the ground that unity was strength—he thought in a few years they would be able to get nearly everything they wanted. They expected Mr. Carteighe to be among them before long. Let them give him a hearty reception. (Hear, hear.) The question was frequently asked, What has the Pharmaceutical Society done for us; what is the good of it? He would give the question an answer on the broad ground, and ask, What was the position of the trade as compared with some 25 years ago? There could only be the reply, It is in a better position. And what did they owe that to? He thought there could only be one answer—namely, that it was owing to the combination of a few who had worked hard, not for their own benefit, but for the good of the trade at large. (Hear, hear.) As to the new Bill, he thought the most important point of it was that regarding the curriculum. Education was the basis of an improved social position. The curriculum would give them that education, and in that their social position would be improved. He hoped the words of the President would be the means of producing a greater amount of enthusiasm amongst them. (Hear, hear.)

Mr. G. E. PERRY, in seconding the proposition, said the address to which they had just listened was a thoughtful and interesting one. He had listened to it, and had very much appreciated its freshness. It seemed to him that they in Birmingham should have a Southall for their President; it was a name historic in the annals of the trade in the city. But more than that, they had in their President a member of the Pharmaceutical Council, and he thought, on that ground, everything he had said, especially with regard to the Pharmacy Bill, would receive the greatest consideration of every pharmacist. (Hear, hear.) He did not wish to talk about pharmacy, but merely to express the hope—a hope that had been expressed by the President and by Mr. Pullin—that they would endeavour, in regard to that Act, to sink their petty prejudices and strive to pull together—to row in the same boat, as the President had said, trying to get all that was practicable for the benefit of the pharmacist. (Applause.)

The resolution was then carried with acclamation.

The PRESIDENT acknowledged the vote, and subsequently a very interesting programme of glees, songs, and recitations was performed.

**THE ACID OF THE GASTRIC JUICE.**—Von Jaksch finds that free hydrochloric acid is present in considerable quantity in the gastric juice as early as a quarter of an hour after the ingestion of food. The quantity depends on the character of the food, and usually reaches its maximum in from one to three hours. The greatest quantity of acid found in any one case—0.1615 per cent.—was obtained on a milk diet; meat diet gave 0.1563 per cent., and a carbohydrate diet, 0.1102 per cent. Digestion appears to be completed most rapidly on a meat diet, next in order coming carbohydrate and milk diet.



## FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

**HEATING THE FACULTY BUILDINGS.**—The director of the School of Medicine stated, at the last general council meeting of the faculties and College of Pharmacy, that, while the appropriation is only 13,000f., the heating and lighting this winter will cost 53,000f., and 90,000f. when the whole buildings are completed.

**A POISONER'S SUICIDE.**—The man Roche, the accomplice of Mme. Weiss, the Algerian poisoner, has committed suicide in the San Juan (Spain) prison, where he was held awaiting extradition. It will probably be remembered that he was in the habit of sending from Spain to his paramour the arsenic employed for slowly poisoning her husband.

**COMMERCIAL TRAVELLERS,** in case their employers become bankrupt, are to be treated like other salesmen—that is, the commissions and percentages earned by *commis-royageurs* are to have the same privilege as the salaries of resident *commis*. Such is the object of a Bill introduced by late Minister of Commerce Pierre Legrand, and likely to pass.

**COCAINE POISONINGS.**—Two recent cases are reported, both occurring with dentists' patients. At Lille Mlle. Delcambre having died, dentist Bouchard was prosecuted. He was acquitted on the charge of homicide, but fined for illegal practice of medicine. At Paris, last week, Mme. G. was nearly dying in consequence of a cocaine injection administered by a dentist, when Dr. Ad. Olivier was called in, and successfully treated her with repeated doses of cognac and hypodermic injections of ether and caffeine.

**THE MINERAL-WATER STAMP,** says Minister Constans, "is not to be a revenue measure, as the price of the stamp will just cover the cost of printing and affixing. It is only intended to guarantee the genuineness of the product." The fact is, a general belief prevails that two or three times as much mineral water is sold as it is possible for some of the springs to supply. The Council of Hygiene was indisposed to accept a tax for revenue, but rather favours a guarantee stamp. On the other hand, the spring-owners are bitterly opposed to any interference. That stamp of nominal value they say will cost them a good round sum, as a new set of office-holders will have to be invented, and provided with good salaries, to see to the apposition of the stamp on each bottle.

**THE TARIFF.**—The Government Bill has been printed and distributed to both Houses. It establishes two tariffs, a maximum and a minimum one; the first to be applied in general, the second indicating the limit below which no goods shall be admitted when the duties are to be lowered as a compensation for equivalent favours. Moreover, Government is to be empowered to apply additional duties, and if necessary prohibition, on any or all products from a country levying unjust duties on French goods or prohibiting them. This is meant as a reply to the McKinley law, and it is said more of that sort is coming. In a general way the tendency is protectionist, but to a moderate extent. Raw wool, also raw silk, cotton, flax, hemp, and jute are to remain free. No change on chemicals, coal, and cereals. Pure silk tissues, free; mixed silk, woollens, and linen, the minimum tariff. The increase will be on fats, oils, cheese, fish, wine, beer, and cider.

**NEW COLOUR FOR ARTIFICIAL BUTTER.**—A Bill has been introduced in the House to impose more stringent regulations on the artificial-butter trade. One of its provisions is to forbid all butter substitutes having the same colour as the real article. They may be of any hue, or remain colourless, but they may not be butter-coloured. Another section provides that the same dealer shall not offer for sale both the artificial and the genuine dairy product. Other regulations respecting labelling, packing, and such details, are not of special interest. The promoters of the Bill remark that Russia has a similar enactment in regard to the colouring, and that other nations require artificial butter to be offered for sale only in lumps of a particular shape or size. As to the separate dealing in the two articles, a like regulation now applies to horse-meat butchers, who are not allowed

to deal in ordinary butcher's meat. In Paris there are shops where they sell nothing but horse's, mule's, and ass's meat, and they do not seem to lack customers, nor is their stock at all repulsive. The Bill has been declared to be "urgent"—that is, deserving to be taken up before its regular turn.

**FRENCH SMOKELESS SPORTING POWDER.**—For some years past Government factories have been supplying dealers with a smokeless powder intended for sporting-guns. The composition of the article has recently been improved, and an official publication has set forth interesting particulars on the subject. The new formula is as follows:—

Soluble gun-cotton	..	..	..	28 parts.
Insoluble gun-cotton	..	..	..	37 "
Baryta nitrate	..	..	..	29 "
Potassa nitrate	..	..	..	6 "

The mixture is first ground while in the wet state, granulated and dried. Next it is made into a paste with ether granulated again, and, after drying, the grains are polished in a revolving drum under a spray of ether. After proper sifting and dusting, the finished product appears in the shape of a slightly yellow granulated powder, shining, hard, and not hygrometric. The number of grains to the gramme ranges from 2,150 to 2,300. Estimated in volumes, the density of the smokeless powder is about half that of the ordinary black sporting article. It may be used for sporting-guns in the same manner and the same measure by volume as common powder. Such are the official accounts. Gun and powder dealers disagree with them on some points. They admit the perfect smokelessness, light weight, and grain uniformity of the product; but they say that, since Government sells it at twice the price of the old powder—viz. 28f. against 15f. a kilo.—it costs as much in the end. And, worse, they say it is apt to burst gun-barrels in very dry weather. It is but fair to add, some doubt remains as to whether the last statement applies to the old or new improved type of powder; and it is hardly necessary to remark that the smokeless sporting powder is not the smokeless army powder.

## WILLS OF DECEASED CHEMISTS.

The will of the late Mr. Henry Allison, the sheriff of Hull, and wholesale druggist, who died on June 13, 1890, was proved at York, on July 14. The gross value of the personal estate amounted to 23,813*l.* 2*s.* 10*d.* The testator bequeaths his personal and devises his real estate for the benefit of his widow and children, giving the former the care of his residence, Marlborough House, for life, with remainder to his son Charles Herbert.

The will of the late Mr. Richard Reynolds, of Highfield House, Bolton (retired chemist and druggist), who died on June 4, 1890, was proved at Manchester on August 2. The gross personalty amounted to 2,277*l.* 6*s.* 6*d.* The testator having some years since made over his pharmaceutical business to his eldest son, leaves his freeholds and leaseholds to be sold for the benefit of his children generally.

The will of the late Mr. George Wallis, of Plumstead, chemist, who died on January 20, 1890, has been proved at the Principal Probate Registry by Mrs. E. C. Wallis, the widow, and Mr. E. T. Hughes, Woolwich, the executors. The gross personalty amounted to 5,590*l.* 10*s.* 7*d.*

The will of the late Mr. J. N. Watts, of Edgware Road, chemist, who died on February 25, 1890, has been proved at Somerset House by Mrs. E. E. Watts, the deceased's widow and sole executrix. The personal estate amounted to 766*l.* 19*s.* 10*d.*

**THE ACTION OF THE SUN'S RAYS** in facilitating certain chemical processes has lately been studied by Brühl, who, in a paper communicated to *Berichte* states that when he threw the rays, concentrated by a concave mirror, upon a retort containing zinc filings and ethyl iodide, the reaction soon began and continued briskly till, at the expiry of a quarter of an hour, the ethyl iodide was all consumed, and a good supply of zinc ethyl ultimately obtained. The investigator considers the concave mirror preferable to a glass lens, which would be less powerful, owing to a large part of the heat rays being kept back.



## Legal Reports.

### BEECHAM'S PILLS.

In the Chancery Division of the High Court of Justice, on Friday, before Mr. Justice Chitty, Mr. McLean, Q.C., moved, on behalf of Mr. Thomas Beecham, the proprietor of Beecham's pills, for an injunction restraining a Mr. Thompson from selling as Beecham's pills an article not manufactured by the plaintiff. Mr. Romer, Q.C., who appeared for the defendant, said affidavits had been filed. It was arranged that the matter should stand over for a week.

### THE PHARMACY ACT.—PROSECUTION AT GLASGOW.

ON Monday afternoon Sheriff Balfour, Glasgow, had before him a case in which Thomas Shields, now or lately residing at 36 Dundas Street, Glasgow, was charged with a contravention of the 1st and 15th sections of the Pharmacy Act of 1868. The complaint, which was lodged by Richard Bremridge, 17 Bloomsbury Square, London, W.C., registrar under the Pharmacy Acts, 1852 and 1868, in the name and by the authority of the Council of the Pharmaceutical Society of Great Britain, and with the concurrence of James Hart, Procurator Fiscal of Lanarkshire, alleged that defendant had been guilty of an offence within the meaning of the above sections, in that on September 9 he, not being a duly registered pharmaceutical chemist, or a chemist and druggist, within the meaning of the Act, had within the premises at 37 Dundas Street, Glasgow, then occupied by him or some other person, unlawfully sold to John Rutherford Hill, of 36 York Place, Edinburgh, a quantity of hydrochlorate of morphia, and a quantity of chloral hydrate, both being poisons within the meaning of the Act; also having sold on September 12 a quantity of chloroform and a quantity of liniment of belladonna, on the 15th having sold a quantity of prussic acid, and on September 23 having sold a quantity of arsenic and a quantity of strychnine. Defendant pleaded "Not guilty."

Mr. Thomas Shaw, advocate, Edinburgh, appeared for the prosecution, and Mr. Deas for the defence.

Mr. John Rutherford Hill stated that he was assistant secretary to the Pharmaceutical Society, of which Mr. Bremridge is secretary. The latter had written protests to the respondent, but the business was continued without any change. Witness was accordingly instructed to investigate, and in consequence made the various purchases referred to in the petition. The method adopted by witness was to write prescriptions in which the poisons were included. These prescriptions he handed to Shields, who, in his presence, compounded them, and handed the bottles to witness, who paid for them. There was a fatal dose in each bottle. Shield's name was not on the list of registered chemists.

Cross-examined: When Shields asked who the prescriptions were for, witness replied "Mrs. Smith." The labels on the bottles bore the words "North British Apothecaries' Hall." If the contents of the bottles were taken according to the directions on them the prescribed doses would not be fatal to an adult. On the first occasion when witness called Shields said that he thought he knew the writing, and wanted to know who the doctor was. Witness replied that he did not think Shields would know the writing, as it was written by an Edinburgh man. The prescriptions were initialed "W. M'L," a fictitious signature. It was a small shop, and there was a partition separating the back portion from the front. Shields never went behind the partition while witness was in the shop. This was the first prosecution he had had in Glasgow. He received information that this shop was in the possession of a medical man before he made the inquiry, but his instructions were to go on with the prosecution.

By Mr. Shaw: No medical man gave any assistance to Shields in making up the prescriptions, and the respondent had no communication with anybody in the back shop.

Thomas Allan, who was present along with the previous witness at the purchases, corroborated his evidence.

This concluded the case for the prosecution.

Dr. Archibald Galbraith Faulds, examined by Advocate

Deas, said that he was a graduate of the Glasgow University, and was "M.B." and "C.M." He was the proprietor of the shop in question in Dundas Street; Mr. Shields was his assistant. The doctor said that he called at the shop at 9 o'clock in the morning, and sometimes at 10, and stayed till 11 o'clock in the forenoon. He was again in the shop from 2 till 4, and in the evening from 8 till 10. At the time he had Shields he knew that he was not a registered chemist. However, he was not to dispense poisons in his absence.

Mr. Deas: Are you aware of the 1869 Act, amending the Pharmacy Act of 1868?

Dr. Faulds: I am not up in all these Acts.

Mr. Deas: Did you think that you were entitled to keep a druggist's shop without a registered assistant? Certainly, because he was a thoroughly qualified man. I was present on the occasions when he dispensed the medicines, and I superintended the sales personally. I was present on the four occasions—September 9, 12, 15, and 23. I stood in the small apartment behind, and my reason for so doing was that I did not wish to be seen behind the counter, as I was a medical man in practice. I remember looking at the prescriptions. The poisons were kept in the back of the shop, with the exception of strychnine, which was within arm's reach. The prescription for sleeplessness was not a poisonous one. The second prescription was for medicine to be used externally, while the others were tonics, and the party getting the medicines said they were for a Mrs. Smith. I looked to see if the prescriptions were all right.

Mr. Shaw, for the prosecution: What is your age?

Dr. Faulds: I am over twenty.

Mr. Shaw: That is not answering my question, sir. How old are you?

Dr. Faulds: Twenty-eight. I graduated in 1888.

Mr. Shaw: Your practice has been to have Shields without assistance from 11 to 2 and from 4 to 8 daily?

Dr. Faulds: Not every day.

Mr. Shaw: Am I wrong, sir, in saying that from 11 to 2 and from 4 to 8 it was impossible to have a prescription dispensed?

Dr. Faulds: Not until I arrived. I conducted the business on that footing. If there was a prescription in a hurry, I was sent for. The first prescription was given between 2 and 4—it might have been 2 o'clock; the last one was dispensed about the same time. The time of the third prescription I cannot say distinctly. It would be either in the morning or afternoon, but whilst I was there.

Mr. Shaw: Would you say it was the evening?

Dr. Faulds: I cannot swear as to that.

The Sheriff: Now, do you remember anything about the third prescription?

Dr. Faulds: I was there when it was dispensed. Dr. Faulds stated that he had received a letter from Mr. Bremridge inquiring the name of the qualified assistant who was conducting the business of which Dr. Faulds was stated to be the proprietor. Dr. Faulds, in reply to that letter, wrote back stating that, although not registered, his assistant was a thoroughly practical chemist, who had been for twenty years at the business. He concluded his letter by referring Mr. Bremridge to section 1 of the Act 32 and 33 Vict., cap. 117.

Mr. Shaw: Would you give me any explanation why you did not, in answer to Mr. Bremridge's letter, tell him that you had restricted this man?

Dr. Faulds: It might have been an omission on my part.

Mr. Bremridge then wrote the following letter to Dr. Faulds:—

"I am quite conversant with the section of the Act referred to, but would point out that by a recent decision in the Court of the Queen's Bench it is clearly laid down that an unqualified assistant may not sell a scheduled poison."

Dr. Faulds replied to this letter as follows:—

"I am favoured with your letter. I beg to point out that it is the invariable practice in Glasgow and elsewhere in Scotland for qualified practitioners and members of your Society to conduct their businesses on the lines indicated. I would respectfully suggest that you communicate with the local secretary of your Society on this point. I am, &c.,

"ARCH. G. FAULDS."

Dr. Faulds then went on to state, in his cross-examination by Mr. Shaw:—"Shields brought the prescription to me in



the back shop. He whispered to me that this was the Pharmaceutical Society man. I looked at the prescription, and saw it was right."

Mr. Shaw: What do you mean when you said the doses were right in the prescription, for Shields might have given a double or treble dose of poison?

Dr. Faulds: The back shop was not a mile away.

Mr. Shaw: Oh, now! Well did you check him in everything he did?

Dr. Faulds: I did not require to.

Mr. Shaw: This man dispensed poison in the front shop while, according to your account, you were in the back shop. Could anybody have seen you?

Dr. Faulds: I was concealed.

Mr. Shaw: Did you carry on this sort of play before?

Dr. Faulds: What do you mean by "play before"? It is always done.

Mr. Shaw: Well, may I take it from you that this same kind of thing went on in every one of these cases?

Dr. Faulds: Yes.

Mr. Shaw: Do you mean to say that for seven hours in the day you are not in the shop, and that only on one occasion you were sent up for? Well, by good luck, you were there when the gentleman called.

Dr. Faulds: We had a good idea that this thing was going to happen.

Mr. Shaw: And you were lying in wait? Would it not have been the better course to have written Mr. Bremridge, saying that you were not doing that which he recommended? Well, do you mean to continue this business upon its present footing?

Dr. Faulds: Yes. Dr. Faulds then said he was the proprietor of the business, and, questioned about a Dr. Dunlop, said: "He may be tenant, but I am the proprietor. I am entered in the valuation roll as the occupier. Dr. Dunlop has gone to America."

Mr. Shaw then asked: Is the patent licence in your name?

Dr. Faulds: Yes.

Mr. Shaw: Are you not perfectly aware that the patent licence is in Mr. Shield's name?

Dr. Faulds: It may have been in his name, but I have to pay it all the same.

Mr. Shaw: Did you ever apply to get it in your own name?—Yes.

Mr. Shaw: And you did not succeed?—I think I did.

Mr. Shaw: On September 9 who held the licence for selling patent medicines?

Dr. Faulds: Mr. Shields.

Re-examined by Mr. Deas, Dr. Faulds said: "After the receipt of the letters I told Mr. Shields not to dispense the poisons."

Mr. Deas: Was he selling the poisons before that?—Yes, so far as I know.

Mr. Deas: Was this Dr. Dunlop a former occupant of the shop?—Yes.

Mr. Shaw, addressing his lordship, said the complaint was a sound one. Not one word was put in the cross-examination to the effect "Did you hear any whispering going on in the back shop?" The evidence was closed, but after that he met a series of surprises in the evidence of the doctor. He considered Dr. Faulds's account vague, for he did not remember a single hour that the medicines were dispensed. The first medicine was dispensed at half-past four, and this was the hour that the Doctor was not usually on the premises, and yet he said that he saw the medicine dispensed. Mr. Shaw had not the times of the others, simply because there was not a shadow of suspicion thrown upon that evidence in cross-examination. It was not hinted for a moment that they were going to have such a plea. Two witnesses spoke to the visit at 8 o'clock. Their recollection was not a vague one. What had Dr. Faulds to say to that? He said that it was the afternoon. Then, feeling himself in a box, he said, "Well, it might be the morning, noon, or night." Mr. Shaw added that there was a good deal more about Dr. Faulds' evidence which he did not like, for he shuffled on the subject of the patent licence. He said that he did not know whose name the licence was in. That was his sworn testimony; and it turned out that this gentleman's mind was in this condition—he knew clearly and well that he had been a party a few weeks ago to changing the name from Shields to his own. He did not give the statute any

regard till September 9. Dr. Faulds thought that he would lose his dignity by going behind the counter. He took no more interest in the matter than you or I would have done, for the man might have given a double or treble dose. He looked at the prescription merely, and that was discharging his duty. The statute is, that no unqualified person should sell poisons; and who was the seller? It was Shields.

Mr. Deas, addressing his lordship on behalf of the defendant, said that in the Hamilton case it was admitted by the doctor that he was not in the habit of going to the shop. The first fifteen sections of the Pharmacy Act did not apply to medical practitioners. Prior to the 1868 Act the sale of poison had been free. A medical man had too much to lose by not attending to the proper dispensing of the drugs in the shops in which he was interested. He asked his lordship to dismiss the accused.

Sheriff Balfour, in giving judgment, said this was a most important prosecution, and the respondent was liable to a penalty of 5*l.* for each offence. Dr. Faulds, who was the occupier of the shop, being a legally qualified medical practitioner, was, under the Act of 1869, entitled to dispense poisons himself, but, in the Sheriff's opinion, was not entitled to put a man who was not registered into a shop to sell poisons. It had been contended that though Shields was not registered Dr. Faulds was duly qualified, and the poisons were actually sold under his superintendence. But even if it had been proved that Shields left the counter and went into the back shop and showed the prescriptions to Dr. Faulds, and the latter approved of them, that was not personal superintendence. If Dr. Faulds were going to personally superintend, he ought to have left the back shop, gone behind the counter, and looked on when the things were being put into the bottles. Then, again, it was said that if these prescriptions were taken according to the labels on the bottles they would do nobody any harm. But the fact remained that they were poisons within the meaning of the Act, which was intended to protect the public, so that a person could not go in and get a dose of poison that would kill another person. Mr. Hill said distinctly that these were fatal, powerful poisons, and that there were fatal doses in all the bottles. Therefore it came to this—that if a clever poisoner went in and said that it was for a Mrs. Smith, he could get the poison, and administer it to his enemy. In conclusion, the Sheriff said that the defence had utterly failed, and for the protection of the public and to put down this wrong system of selling poisons, he would inflict a penalty of 3*l.* in each case, or 12*l.* in all, with 2*l.* 2*s.* expenses. Mr. Deas intimated an appeal against the decision on behalf of Shields.

## BANKRUPTCY REPORT.

*Re* SAMUEL BENNETT, Tunstall, Drysalter.

A MEETING of creditors in this bankruptcy was held at the office of the Official Receiver, Newcastle under-Lyme, on the 27th inst. The debtor was formerly a chemist and druggist, and was also a member of the Tunstall Board of Health. It appeared that the debtor had not filed a statement of affairs in due course, which he explained by saying that his books had been kept by a qualified clerk, who, however, left him in May last. The books had not been properly kept since. The Official Receiver refused to allow him any assistance, and he could not afford to pay for it himself. He had been working at the statement night and day. The Official Receiver said the estate was not a complicated one, the assets being included under three heads; and there was a list of creditors, with their claims, to be made—a matter which any boy might have done. There had been ample time for the preparation of the statement of affairs, and he did not think that he would be justified in allowing the debtor—an educated man—assistance which would not be granted in the case of an illiterate man. So far as he could gather, the unsecured liabilities were about 2,000*l.*, and the assets entered at 430*l.*; but part of the furniture was claimed by the debtor's wife, so that that sum might be reduced. The cause of failure was said by the debtor to be heavy losses in connection with the exportation of borax and tincal, bad debts, and law suits. He proposed applying for an adjournment of the public examination, with a peremptory order for the debtor to file a statement of affairs, and in the meantime he should realise the estate.



## STEREO-CHEMICAL THEORIES.

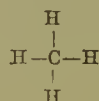
THIS was the title of a paper read at a meeting of the Chemists' Assistants' Association on October 23, Mr. A. Campbell Stark, President, in the chair, by Mr. T. P. Blunt, M.A., F.I.C., F.C.S.

Mr. Blunt said we were indebted to the genius of two master-minds—Le Bel and Van t'Hoff—for raising the chemist from the thralldom of the printed page to the broader conception of a chemistry of three dimensions, appropriately termed "Stereo-Chemistry." When chemical affinities extend in one or two directions, only a plane-surface diagram is conceivable, but when other affinities are added, their directions must lie in different planes if all the conditions of equilibrium are to be observed.

In the use of models and diagrams to illustrate chemical constitution, we should guard against looking upon them as representing the exact conditions under which the atoms exist in a complex molecule. According to the kinetic theory, they are in constant movement, and models and diagrams represent only the points of equilibrium towards which their movements tend.

The new conception would account for differences in bodies not only isomeric in the usual sense, but apparently of the same chemical constitution, and would avail itself either of differences of movement of the atoms which build up the molecule, or of differences of position of the atoms in space.

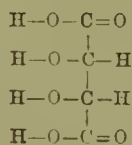
The well-known plane constitutional formula for such a body as methane,



for instance, gives to its substitution derivatives too many possible isomers; with dichloral-methane,  $\text{CH}_2\text{Cl}_2$ , for example, we could conceive the following isomers—



but, as a fact, only one such body is known. To escape this difficulty, one conception would suffice, viz., that the four hydrogen atoms in methane were united to a carbon atom lying at the geometrical centre of a regular tetrahedron. Then would one case of isomerism be possible, viz., where each of the atomicities was associated with a different group. We should then get, as in the models shown, two non-superimposable figures, one of which would be the reflected image of the other. A carbon atom thus combined is termed asymmetric; example, tartaric acid:—



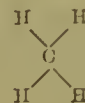
In the representation of simple atoms—methane, for example—the tetrahedron is assumed to be regular, and the four atoms of hydrogen to be equidistant from the carbon; but when, as in tartaric acid, different groups are associated with the carbon atom, it is improbable that the forces involved are equal, hence the groups would lie at various distances from the centre, and the completed tetrahedron would become irregular. This kind of isomerism would manifest itself in two ways: (1) in its action on polarised light; (2) in its crystalline form. The isomers would twist the plane of polarisation to the right and to the left respectively, and their crystals would show the phenomenon of "enantiomorphy," the crystal of one being the reflected image of that of the other.

After illustrating these statements Mr. Blunt proceeded to consider the case of non-saturated carbon compound

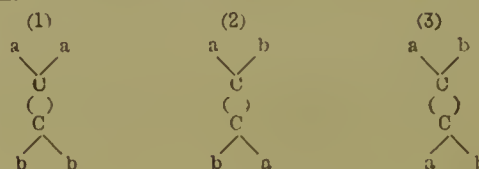
taking ethene,  $\text{C}_2\text{H}_4$ , as the appropriate type, representing it by the model thus:—



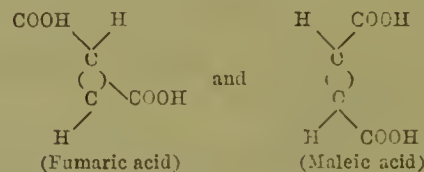
approximating to the plane surface formula for methane—



the place of the single carbon atom being taken by two doubly-linked ones. As with methane, so with ethane there is the possibility of two isomers, for, representing the two pairs of atoms by a-a, b-b, the following arrangements are possible:—



(3) and (1) being identical, since there is no evidence that the valencies of the combined atoms are of different values. In this case there is no asymmetric carbon atom, and therefore no difference in action upon polarised light, nor "enantiomorphy" of crystals. The distinctions between the isomers were shown in other ways. The body,  $\text{C}_2\text{H}_2\text{I}_2$ , is an excellent example of the truth of the *a priori* view previously given. Two bodies of this formula are known to exist, both being neutral to light, but both showing marked difference in specific gravity, volatility, and fusing-point. The author thought that the view just considered offered a simple and natural explanation of an isomerism which had been previously unintelligible to chemists. Maleic and fumaric acids are both represented by the formula  $\text{C}_4\text{H}_4\text{O}_4$ , and nothing had shown them to differ in constitution until it was suggested that they might be stereo-metrically represented thus:—



The author next proceeded to discuss the conditions arising from the combination of a chain of carbon atoms as represented by groupings of propyl, butyl, and amyl compounds. He framed the chains from the models to show the special significance of the stereo-chemical idea as influencing our views of such compounds. The chains were no longer straight, but curved, with a tendency to return upon themselves. The curvature was due to the angles at which the atoms were combined. Mr. Blunt gave numerous illustrations of his remarks with models. In concluding, Mr. Blunt said, "The study of 'stereo-chemistry' is merely in its infancy, but is receiving extensions every day as regards the carbon compounds, and attempts, more or less successful, are being made to apply it to other elements, notably to nitrogen. Many phenomena of which the causes are at present obscure will no doubt in time find an explanation in this theory."

The President congratulated the Association on being the first recipient of a lecture in the English language on a subject which had not previously been dealt with in this country. The lecture intimated to him that tendency which many branches of science seemed to have, to base themselves on the axioms of mathematics. It reminded him of Professor Mendeleeff's lecture "On the Application of Newton's Third Law of Motion to Chemical Combination," for cases of chemical equilibrium analogous to the equilibrium expressed by such figures as the triangle, square, and parallelogram continually occurred, particularly in Mr. Blunt's explanation of the dextro and levogyrate properties in isomeric compounds. The subject was so new and so revolutionary to pre-conceived ideas that it was impossible for him to discuss



it fully without first grappling with it alone. He called upon Dr. Passmore, a member of the Association, recently returned from Professor Fischer's laboratory in Germany, to discuss the points Mr. Blunt had raised.

Dr. Passmore congratulated the association on their endeavour to stimulate the English chemists to the study of stereo-chemistry, so much neglected in this country, and complimented Mr. Blunt on his concise and clear introduction to the subject. Victor Meyer had defined the study of isomerism as synonymous with the study of organic chemistry, in contradistinction to that of inorganic chemistry; and of all forms of isomerism that occasioned by varying geometrical conditions within the molecule was most alluring to the student. Though stereo-chemistry was inseparably associated with the names of Le Bel and Van t'Hoff, definite views of the subject were certainly entertained as early as 1867, when Kekule propounded his famous benzene ring; and since 1871 Victor Meyer had employed model tetrahedra in his lectures to demonstrate the existence of the three dimensions in the carbon atom. In reference to the Viennese models shown by Mr. Blunt and recommended by Victor Meyer, Dr. Passmore thought that the beginner by their use was liable to entertain the erroneous idea that the four valencies, or chemical forces, were actual projections from the carbon atom and equidistant from one another, implying that forces did not always act in a right line; and he thought this point of sufficient importance to warrant a caution. It was a sort of error that might be eliminated by regarding the carbon atom as a body of definite (though unknown) dimensions and shape, on the surface of which the valencies occurred as four centres of force. Dr. Passmore also drew attention to some remarks of physiological importance made by Mr. Blunt in the early part of his paper. In the preparation of active from inactive modifications of compounds containing an asymmetric carbon atom in the molecule, it was curious that the dextro modification was nearly always decomposed by the fungus leaving the levo intact. In chlorophyll, the dextro variety is utilised as food or reserve material, whilst the levo modification manufactured at the same time is used in the preparation of albuminoids and analogous products. Dr. Passmore then referred to the stereo-chemistry of nitrogen—which might be represented by a tetrahedron one corner of which was occupied by the nitrogen atom itself, the other three by the three valencies—and that of other elements, silicon, oxygen, and sulphur. The vote of thanks was supported by Messrs. Dymond, Lloyd Williams, and Strother, and acknowledged by Mr. Blunt.

## Foreign News.

**A FREE TRIP TO EUROPE** is offered to American druggists by a manufacturer of cough-drops. The tripper is to be the druggist who sells the largest number of boxes of the cough-drops between October 1, 1890, and May 1, 1891.

**HE SUSPECTS THE DRUGGISTS EVEN.**—The Czar objects to Russian drugs. He will take no physic but what comes from a private medicine-chest which is kept in an iron safe in the Empress's room, and of which she herself has the key. This chest, by the way, was ordered in Paris.

**GREAT ADVANCE IN PLATINUM.**—According to Russian advices, the whole of the platinum which will be produced in the Ural mines for the next ten years has been sold in advance to certain foreign companies. Owing to these contracts the price of platinum has advanced from 2,500 to 12,500 roubles per pound.

**TOO CRITICAL.**—At Korostyshev, South Russia, a local chemist, named Revitch, recently refused to make up a young medical man's prescription on the ground that it was "concocted in a stupid manner." The doctor appealed to a justice of peace, with the result that the chemist was sentenced to seven days' imprisonment.

**DISEASES OF CINCHONA-TREES.** In his report of the Government cinchona-plantation in Java for the year 1890, Mr. Van Romunde observes that, in addition to numerous other enemies, the cinchonas in the plantations under his

control suffer especially from three enemies. The first of these is the *Helopeltis Antonii*, a winged insect which attacks only the young plantations, and has to be destroyed by manual labour. It is a peculiar fact that as soon as the young cinchonas attain a certain height, this insect ceases to damage the trees; and it is believed that the cause of this lies in the fact that as soon as the young trees are high enough to prevent their crowns from being disturbed by labourers working in the plantations, myriads of spiders spin their webs in the top of the foliage, and catch the *Helopeltis* in them. This belief is strengthened by the observation that in one plantation which had been considerably thinned and pruned the insect, which had previously been absent, began to swarm immediately when the trees were partially denuded of their foliage. The cancer of the cinchona-trees is a plague which has not as yet created much damage on the Government plantations. It usually sets in after a prolonged wet season. The leaves of the affected branches turn yellow and the parts attacked must be lopped off at once. A more dangerous plague is the root-disease which still rages seriously in some parts of the plantations. It is caused by excessive moistness and insufficient ventilation of the soil. Watering the plants with a 1-per-cent. solution of corrosive sublimate has proved an excellent remedy, especially in the case of young plants. A small caterpillar must also be added to the dangerous enemies of the cinchona-trees. It made its appearance in the Government plantations two seasons ago, and is multiplying to such an extent that, unless promptly exterminated, it threatens to become a source of extreme danger. Although the caterpillars are destroyed by thousands by setting fire to their nests with torches, the pest continues unabated and in some of the plantations not a single tree remains free from it.

**INDIGO-GROWING IN CENTRAL AMERICA.**—A correspondent of the *Oil, Paint, and Drug Reporter*, writing from Central America, says: That portion of Nicaragua which stretches to the north-east from the shores of Lake Managua is known as one of the best indigo-growing districts of the world. There, as far as the eye can reach, the rich green undergrowth, what the natives call "jiquilite," or the indigo-plant, covers every cleared space. In planting it the richest soil is carefully cleared and turned over, trenches are dug two or three inches deep and about a foot apart, into which the seed is thrown and lightly covered with earth. The planting is done in May at the close of the dry season, and the shrub is ready to be cut in August. The young bushes have to be carefully weeded to prevent any other plants from springing up and injuring the quality of the indigo. About the middle of August the leaves present a rough surface and appear as if covered with a green sand, when the stalk is cut off by the gatherers a few inches above the ground, leaving a few sprouts remaining, which produce a second crop that is gathered about two months later. The first year's crop is usually small, that of the second year much greater, and the third year's the largest, after which the crop diminishes until the seventh year, when the fields have again to be cleared and planted. The cut plants are tied in bundles, like wheat, and carried to the fermentation vat, where enough water is allowed to run in to cover them; then the swelling mass is weighted down to steep and ferment. The only skill required in the manufacture is to be able to check the fermentation at the proper moment, and natives competent to do this receive from \$5 to \$10 per day. When the solution of indigo has a peculiar green colour it is drawn off into another vat, where it is incessantly agitated and beaten by revolving fans until it changes from its original green colour to a dark blue, and the colouring matter commences to precipitate. There is a species of climbing-plant, or "bejuco," an infusion of which greatly facilitates and quickens this last change. The water is then drawn off, leaving a granulated soft blue clay, which is drained in hags, then dried in the sun, carefully selected, and packed for export in serons of 150 lbs. each. Forty or fifty years ago Nicaragua produced from 9,000 to 10,000 serons per annum; but now it may be doubted if the total annual product exceeds 2,000. Most of the fine haciendas of the high country are now commencing to graze cattle, and though many still remain, where labour is cheap, the indigo farms are gradually disappearing and cattle, coffee, and cacao fields are taking their place.



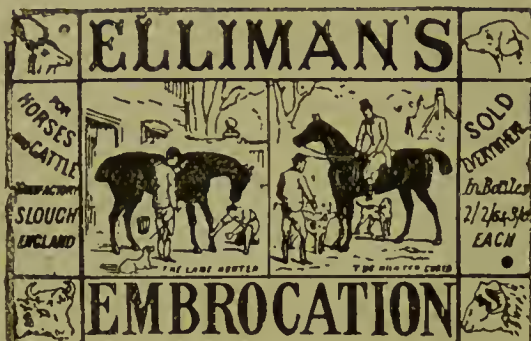
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**EDITORIAL NOTES.**

**THE SALE OF POISONS.**

THE Parliamentary Bills Committee of the British Medical Association have for some time past had the sale of poisons under their consideration, with a view of suggesting, if possible, some modifications of the law in the interest of the public. Questions relating to the alleged growing demand for opiates seem to have suggested the inquiry, which, however, has been extended beyond that point. In last week's *British Medical Journal* a memorandum on the subject, by the chairman, Mr. Ernest Hart, is published in full, and though it offers no definite proposal, it may be regarded as of importance in the indication it gives of the direction of representative medical opinion.



Mr. Hart gives, in the first place, a very accurate epitome of the law at present in force as expressed in the Arsenic Act and in the Pharmacy Acts of 1868 and 1869. It is then pointed out that the law lays no other responsibility upon the seller of a scheduled poison than compliance with certain conditions, though, no doubt, he would be liable under the ordinary law for the consequences of culpable carelessness in the handling of the poisons, resulting in injury. But there is nothing to suggest a legal limit as to the quantity that he may sell. In certain cases the duty is imposed upon him of making inquiry as to the purpose for which the poison is required, and the Arsenic Act contains a provision imposing a penalty upon a purchaser who gives incorrect information, but it does not require that the seller of an arsenical compound shall have any special skill or knowledge of the nature of the compound in which he is dealing to enable him to act upon the information other than by recording it.

Of course there is a moral obligation laid upon all dealers in poisons, as there is upon dealers in other dangerous articles, to use their knowledge and judgment to prevent disaster to the public, and any apparent neglect of this obligation may become the subject of censure by coroners or magistrates. But even such censure would be extra-statutory.

The statutory limitation of supplies of opiates and other potent medicines to the public might be attempted, according to Mr. Hart's memorandum, in either of three ways:—

(1) By enacting that certain substances should not be supplied except upon the order of a qualified medical practitioner.

(2) By enacting that not more than a specified quantity of certain substances should be supplied to the same person within a given time.

(3) By throwing upon the seller the onus of determining the limits of the supply of poisonous substances in each particular case, and holding him responsible when a reasonable and proper limit is exceeded.

No. 1, it is explained, is the plan adopted in most continental countries. But the writer does not seem to anticipate that the stringent restrictions affecting the supply of medicinal substances generally on the Continent would find favour here, and besides he recognises that with the free trade in nostrums that has grown up in this country, any such limitation would be unavailing. No. 2 he also dismisses as impracticable and calculated to lead to mechanical and unintelligent handling of potent medicines. No. 3 he thinks would be reasonably objected to by present authorised vendors, who, he remarks, "as a class have responded to the expectation Parliament had when it placed the dealings in poisons in trained hands, by exercising a wise and vigilant discretion in all their transactions." So far, then, it would appear that the best protection of the public is ensured by the provision placing the sale of poisons in trained hands. But this provision is quite compatible with some extension of the same principle, and the memorandum proceeds to discuss several considerations of importance. These are:—

I. The limited extent of the present poison schedule. Here is noted the disinclination of the Privy Council, as representing the Government of the day, and, presumably, public opinion, to impose further restrictions in this direction. The Privy Council's refusal to schedule the mineral acids and carbolic acid is mentioned in illustration of this attitude.

II. The condition of the law relating to proprietary preparations containing poisons. The writer is in error in assuming that the exemption of "patent medicines" in the 16th section of the Pharmacy Act "practically places all nostrums outside the operation of

the Act, although many of them are believed to be powerful preparations of scheduled poisons." In any case, the regulations of the 17th section apply to these as to any other poisons, as has been established in several cases. The writer adds:

"Even if the view recently put forward on behalf of the Treasury be correct, that the exemption only applies to medicines that are the subject of a patent, it is doubtful whether the nostrum-maker could be made to do more than is already done by one of their number—namely, the maker of 'Essence of Linseed'—which is to use a poison label in conjunction with any fancy designation he may choose to give his mixture. Probably he would not, under the existing law, be obliged to reveal even the name of the poison present, to say nothing of the quantity, and the seller would have no information, beyond that contained in advertisements, to guide him in forming a judgment as to the quantity he ought to sell. It is notorious that the sale of opiate nostrums has in recent years increased in far higher ratio than that of the recognised opiates, and unless proper precautions were taken the imposition of restrictions upon the supply of the more legitimate medicines might still further extend the business of the quack."

"The view recently put forward on behalf of the Treasury" has nothing to do with the question of labelling, and only refers to the persons who may sell poisonous patent medicines.

III. The conditions under which chemists and druggists are called upon to supply poisons and medicines containing poisons. Chemists and druggists, it is said, might find it difficult to justify a refusal to supply a poison or dispense a prescription. A case is mentioned of a Ramsgate chemist being censured by a coroner's jury for refusing to dispense an initialled prescription ordering  $\frac{1}{2}$  oz. of tincture of digitalis as a dose.

IV. The conditions under which medical men may supply medicines containing scheduled poisons to their patients would favour the evasion of restrictive legislation by practitioners who keep open shop.

V. It would not be difficult, in most parts of England, especially with the facilities of the parcel post, for a person desiring an excessive supply of opiates, by dividing his patronage, to obtain almost any quantity in small parcels.

VI. The tribunal to which alleged offences should be referred, the penalties and the means of enforcing them. If legislation were undertaken with a view of checking the supply of opiates, it would be a question whether the punishment for improperly supplying poisons should not lie in the direction of depriving the offender temporarily or permanently of his qualification for dealing in poisons. The Council of the Pharmaceutical Society would, it is thought, be the body best qualified to act as a tribunal, though probably it would be very unwilling to undertake the duty.

The memorandum containing these representations has been sent to the Pharmaceutical Council and to the Apothecaries' Society. The Master of the Apothecaries' Society replied in July. His suggestions were simply that carbolic acid should be added to the schedule, and that proprietary preparations containing poisonous ingredients should at least be required to be labelled so as to signify the fact. The Pharmaceutical Council has not yet replied.

The object which the British Medical Association has in view—that, namely, of checking the reckless supply of narcotics to persons not properly qualified to administer them judiciously—is so excellent that the memorandum should command the respectful attention of chemists and druggists. Pharmacists will be willing, we assume, to co-operate in any practicable and reasonable way towards the attainment of the aim set forth. But the arguments against any official legal restriction of supply of such poisons are so obvious and



so complete that there is but little hope of assistance in this direction. The advantages to the public of the qualification and of the character of the person to whom the business in poisons is entrusted comes out, therefore, in a very marked manner by this discussion.

There is a disposition in some quarters, which is certainly encouraged at Bloomsbury Square, to treat the sale of poisons as a nuisance and inconvenience; at the utmost as a necessary evil. An ex-vice-president said at the last Council meeting: "Pharmacists would be delighted to get rid of them; they were an intense annoyance and worry." What should we think of doctors who complained in a similar manner about infectious diseases? Then we have from the organ of the Society, as we have had before from its President, a recommendation that as chemists have the control of the sale of poisons in their hands they should help themselves out of it by charging a professional fee when they supply; and the controversy has started whether that professional fee should be 1*d.* or 3*d.*! The suggestion is not likely to come to much, but it has no doubt been pigeon-holed in the Privy Council office, and will be a crushing argument against any future proposal for extension of the schedule.

As we show in our next article, the competent supervision of the sale of poisons is the essential duty of a chemist and druggist, the *raison d'être* of his legalised privilege. The profit attaching to it is trivial, but the due and conscientious recognition of the responsibility attaching to it is the justification of the laws already passed, and the best basis for an extension of them.

### THE VULNERABLE POINT.

"The time has come when, for the welfare of the public, the Pharmacy Act should be rendered efficient."—PROFESSOR ATTFIELD, Southport, September 18, 1883.

THESE words of the high-priest of compulsory education in pharmacy echo somewhat strangely seven years after they were uttered. Then Professor Attfield demonstrated that the Pharmacy Act was inefficient, and he demanded of the State, as a remedy, first, an extension of the poisons schedule; second, restriction of the sale of simple and compound medicines of the British Pharmacopœia to chemists and druggists; and, third, a similar privilege in regard to the dispensing of the prescriptions of medical practitioners. The condition upon which this demand should be made was expressed by Professor Attfield the year before in his address on "The Relation of Pharmacy to the State," when he said: "Let us take care that the thoroughness of our pharmaceutical education fully demands or warrants such legislation, which it will do when founded not alone on that very inefficient test termed 'a pass examination,' but also on a properly arranged public curriculum diligently followed for an appropriate period." This, with an extremely wholesome regard for our title "chemist and druggist," represented the high-water mark of pharmaceutical aspirations seven years ago. It is not unprofitable to keep that clearly in view now. Professor Attfield demanded much of the trade, but he claimed much in return—practically a monopoly in all that is profitable in pharmacy. Whether the doctrine thus laid down by the Professor was the starting point or not, the fact is that, since the collapse of Mr. Carteighe's "root-and-branch Pharmacy Bill" of 1883, the one idea which has imbued the Pharmaceutical Council has been the curriculum. It tried to get it by by-law, but the Privy Council would not sanction that proceeding; it has since attempted to establish it by Act of Parliament, and has twice failed to carry a curriculum

Bill through Parliament. There was but little energy in the parliamentary support given to the Bills, and the opposition was determined and healthy. Last Session the Council changed its tactics. It had previously complained when a branch-shop clause had been tacked on to the Bill, and had refused to follow the lead thus given, on the ground that this would destroy the simplicity of the measure. But it was found necessary to gild the curriculum pill with something, if it was to be got down, and consequently the Bill drafted early this year contained a loosely-drawn medical-prescription clause. This did not secure sufficient enthusiasm, and in the Bill for next Session it has been thought desirable to make a higher bid by the addition of a clause providing for exemption from jury service. But these additions have been made so grudgingly that chemists may be excused for doubting the sincerity of their conjunction with the Council's curriculum scheme. With Professor Attfield the curriculum was a means to an end; he would use it, and the improvement following in pharmacy, as a lever for moving the State to grant a large measure of protection to registered chemists and druggists. The Council now tells us that the State will grant no such thing. It is not far wrong there. Yet, although the ultimate purpose is admittedly beyond our reach, the Council persists in its demand for the curriculum. And why? Because, they tell us plainly, education is the best protection which the chemist and druggist can have against the competition which he has to contend against. This brings us to the vulnerable point—the point which opponents in the trade have hit at, the point which legislators have hit at, the point which the State advisers will be compelled to hit at, if they value the opinions of their specialists. For chemists and druggists were set apart by the State not so much for the encouragement of pharmaceutical science, but to take charge of and distribute poisons to persons requiring them for lawful purposes. We have all along maintained the importance of this privilege. It is unique in modern legislation. Doctors and dentists have the protection of their titles only; chemists and druggists have that also, and a substantial monopoly in a class of marketable commodities. Obviously this great advantage is seriously imperilled when we increase the difficulty of distributing these commodities—these poisons. And it is quite possible for a representative of the public to argue that this is what the curriculum will do. All its leading advocates tell us that a time is coming (after the curriculum is established) when there will be a great differentiation in pharmacy; there will be an upper class, comprising the educated, examined and registered men, who will do the higher branches of work—the dispensing and what not; and a lower class, mere traders in drugs, hair-oil, sundries, etc. But will such a development be beneficial to the public or to the trade? The State is never likely to wipe the poisons laws off the statute-book; public safety requires them, and with them a class of trained distributors. Raise the educational standard of these distributors beyond a certain point, and the inconvenience consequent on decreased numbers will become so great that illegal trading in poisons will be fostered, and the result of that would be, as has happened recently in Ireland, the creation of a lower standard of qualification. The inconvenience which would attend the distribution of poisons would become little short of a calamity if applied to medicines in daily use; that is, if the supply of these were restricted to highly and expensively educated men. We do not suppose anything like this will happen, but it is the logical outcome of the doctrines of the curriculumists. We have no objection to higher education, we rather encourage it, but legislators will have to look at it as it affects distributors of poisons.



## A FRENCH PHARMACY BILL.

THE humble little efforts made in our Parliament to amend the pharmacy laws of Great Britain and Ireland are amusingly insignificant when compared with the noble schemes which form such an invariable delicacy for every French Parliament. Our well-informed Paris correspondent has given us particulars of an interesting procession of these "projets de loi," and some of us may have wondered to what limbo these have been consigned. Their anxious friends may be reassured, however. They are not lost sight of, and now Deputy César Duval, himself a pharmacist, has presented a report on behalf of a Commission which has been considering the measures suggested by ex-Minister E. Lockroy, M. Ricard, and others. As a result of their cogitations, the Commission has drafted a new Bill, and our correspondent thus summarises the clauses by which notable changes in the law at present prevailing are proposed.

Henceforth (2) there is to be but one pharmacist's diploma. (12) All medicinal substances, simple or compound, excepting those mentioned in section 13, may be freely dispensed by the pharmacist at the request of the purchaser; such medicaments to bear on the label the dispenser's name and address, and the name of the active substance or substances, when the preparation is not official in the Codex or prescribed by a physician; no simple or compound medicine, French or foreign, to be sold unless the precise formula has been communicated to the Academy of Medicine, or is official in the Codex; and every French pharmacist is to have access to the formula, and to be at liberty to dispense the said preparation, provided he do not infringe the trade-mark. (13) All poisonous substances, or preparations designated as such on existing lists, or to be added hereafter, may not be freely dispensed, but shall only be delivered on prescriptions signed by duly authorised persons; an appendix is to be made to the Codex to establish a list of medicaments which may not be dispensed more than once on the same prescription. (15) All non-poisonous medicinal plants, and certain simple medicines currently used in domestic practice, may be freely sold by all persons, graduated or not; hereafter no herbalist's diploma to be conferred. (16) A special corps of pharmacy inspectors to be created, selected from pharmacists formerly in actual practice. (17) Industrial establishments, mutual benevolent associations, religious communities, &c., may have a pharmacy of their own, but it must be managed exclusively by a pharmacist, and no medicines but those named in section 15 may be dispensed to outsiders; hospital pharmacies may deliver medicines gratuitously to the poor; and every pharmacist is to deliver, on the order of the Assistance Publique, all medicines needed for the poor, at a rate to be hereafter established. (19) Any person not graduated practising pharmacy or entering into partnership with a graduate to conduct a pharmacy, to be liable to a fine of from 500f. to 3,000f., which may be doubled when the offender is a physician. (21) A like fine to apply to a pharmacist entering into such partnerships.

Our correspondent remarks:—"Some sections of the Bill—12 and 13, for instance—are not likely to meet with any opposition; indeed, such legislation has long been needed. In the same manner, but little can be said against sections 17, 19, and 21. But sections 2 and 15 will not be readily accepted. Pharmacists of the second class and herbalists are not disposed to be abolished thus summarily. Numerous and popular as they are, it is likely they will be powerful enough to either have the obnoxious clauses amended, or to defeat the Bill altogether. A very curious and novel clause is section 16, aimed at the colleges of pharmacy now charged

with the duty of inspecting. It is an open secret that pharmacists are dissatisfied with the present composition of the faculties of most pharmaceutical schools. They complain that the professors represent all sciences and professions except pharmacy, and teach everything but pharmacy."

We shall certainly be surprised if the great "spécialité" makers of France submit tamely to the conditions of the twelfth clause. We are aware that at present a form of approval of their products by the Academy of Medicine has to be gone through before the sale of medicinal compounds is legalised. But this, as we understand it, is something very different from the inscription of their formulæ for every pharmacist to copy, which is now demanded. Notwithstanding occasional denunciations of it, the "spécialité" trade of France, which spreads its branches throughout all the Latin races of the world, is most tenderly appreciated by the people and the Government. The latter has recently shown its affection for it by offering to share in its profits to the extent of a stamp duty as in England, and will be hardly disposed at this particular moment to ruthlessly uproot it.

## COMMENTARY.

DEFENDING THE TITLE.—Mr. Carteighe complains to the chemists of Manchester of our charge against him that he does not care to defend the title "chemist and druggist." He conveys the impression that some unjust charge has been made against him. And almost in the same breath he states that the Council thought it useless to prevent the use of the title where they could not prevent the sale of poisons. How much he values the privilege of selling poisons is indicated by his recent description of the Pharmacy Act as that "poor wretched Poisons Act." We see no way of understanding Mr. Carteighe differently.

SPERMIN has been known under various names since 1851—as Charcot's or Chareot-Neumann crystals, as the asthma crystals of Leyden, and as Schreiner's crystals. In 1865 Boettcher found them in semen, and they have been obtained from the spleen, the blood, the spinal cord, white of egg, sputum, and old anatomical preparations. In 1888 Ladenburg and Abel established their identity with ethylenimine,  $\text{CH}_2\text{CH}_2\text{NH}$ . The alkaloid, properly called piperazine hydrochloride, resembles other ptomaines chemically, and when free has the odour of fresh semen, the same odour sometimes found in sputum being also no doubt due to its presence.

PERSONAL SUPERVISION.—Mr. Justice Hawkins declined to indicate definitely, in his important judgment in reference to the unqualified seller some six months ago, just how much immediate attention was necessary on the part of a qualified man to ensure the legal proportion of personal supervision. It would, no doubt, be impossible to lay down a sufficiently comprehensive rule to cover all cases. But Sheriff Balfour found no difficulty in deciding at Glasgow, the other day, in the important case of the Pharmaceutical Society v. Shields, that the supervision which, according to his own testimony, Dr. Faulds gives to the business does not satisfy the requirements of the law. Dr. Faulds said he was behind a screen in the shop, and the prescriptions were shown to him before they were dispensed, but there was no need for him to check the proceedings of the dispenser. Glasgow doctors who compete with chemists and druggists must understand that that is what they must do if they employ unregistered persons as assistants in their open shops.



**LONDON CORRESPONDENTS AND A SALE OF POISONS BILL.**—The London correspondent of the *Manchester Courier* has "just received, from a source which must be regarded as absolutely trustworthy, some important information as to the new Bill in relation to the sale of poisons which will be introduced into Parliament." The gentleman who similarly illuminates the *Liverpool Courier* with metropolitan news has discovered that we are "likely to have a Bill submitted to Parliament on the subject, this being the result of the suggestions to the general governing medical body." It appears from what follows that in both cases the correspondents alluded to have got hold of the fact, probably from the *Telegraph*, that the Pharmaceutical Society had drafted a new Bill, and they had also seen the report of the British Medical Association on a Sale of Poisons Bill. They had not read this report closely enough to discover that the Association found the difficulties in the way of proposing a Bill too great, but, assuming a connection between the two pieces of news, they have picked out some of the medical remarks, and made them stand as proposals of the forthcoming Bill. Clever, but not encouraging to our faith when these authorities next reveal Cabinet secrets.

**HYDRAZOIC ACID.**—Professor Curtius has recently discovered a body which is gaseous, and which has the formula  $\text{HN}_3$ . It is made by the interaction of two molecules of hydrazine ( $\text{N}_2\text{H}_4$ ) with one of benzoylglycollate. Benzoylhydrazine is one of the products, and this on heating with nitric acid is changed to the nitroso compound, which on dehydration is changed to benzoylazoimide, and saponification does the rest. The changes may be judged from the following comparison:—

1. Benzoyl-hydrazin .. ..  $\text{C}_6\text{H}_5\cdot\text{CO}\cdot\text{NH}\cdot\text{NH}_2$
2. Nitroso-hydrazin .. ..  $\text{C}_6\text{H}_5\cdot\text{CO}\cdot\text{N}\begin{smallmatrix} \text{NO} \\ \text{NH}_2 \end{smallmatrix}$
3. Benzoyl-hydrazoate .. ..  $\text{C}_6\text{H}_5\cdot\text{CO}\cdot\text{N}\begin{smallmatrix} \text{N} \\ \text{N} \end{smallmatrix}$
4. Sodium-hydrazoate .. ..  $\text{NaN}\begin{smallmatrix} \text{N} \\ \text{N} \end{smallmatrix}$

In the fourth stage, by saponification with sodium hydrate, the benzoylazoimide is converted into sodium benzoate and sodium hydrazoate, which on being treated with sulphuric acid yields  $\text{HN}_3$  in the gaseous state. The acid combines with metals to form salts; barium, mercury, and silver salts have so far been obtained, and we shall doubtless hear more about the body yet.

**COMPANIES AND THE PHARMACY BILL.**—The President professes to have a number of crushing replies up his sleeve to those misguided people who object to his Bill because it practically accepts as a necessary condition of things "qualification by registration." We do not know how it strikes Manchester men, but we can tell them that it is not good enough for Londoners to be put off with mysterious hints of cabinet secrets when they are invited to a conference. The absurdity of assuming that this one clause would certainly wreck the Bill, while the same danger was not incurred by any of the other clauses, struck one of the Manchester speakers, who called attention to it, and was not answered. Mr. Carteighe considers, apparently, that his argument about the executors' clause is a sufficient reply to the strong demand for a companies clause. "You insist," he says in effect, "that when you die your executors shall retain the right of continuing your business with a qualified assistant; but you refuse to companies the right of carrying on a similar business with a similar condition. You are illogical." To this we reply, first, that the cases are not strictly analogous; executors are merely continuing a business which was established by a legally qualified person; companies are seeking to esta-

lish a new business without qualification. Moreover, companies can and do call themselves "chemists and druggists" without employing a qualified assistant. There is no analogy to this. But, secondly, we would argue that the Pharmacy Act without such an exemption in favour of executors would be monstrously unjust and simply impracticable. A doctor's business is entirely professional; it is a necessity of the case that his practice must die with him. A chemist's business is—how much?—2 per cent. or 5 per cent. ? professional, and no sane body of men would consent that for the sake of that little fraction of professionalism the other 95 per cent. of their business property should be practically sacrificed when they died. But it does not follow by any means that because this executors' exemption is right and necessary, it must be therefore right and necessary that everybody should be permitted to carry on a chemist and druggist's business with the aid of a qualified assistant. But such is Mr. Carteighe's logic.

#### A. B. C. LINIMENT. BY THOS. MABEN.

I HAVE recently had to consider the necessity or desirability of providing an inseparable A. B. C. liniment, that is, a liniment composed of equal parts of aconite, belladonna, and chloroform liniments (not chloroform, as stated in THE CHEMIST AND DRUGGIST of October 18, but chloroform liniment), in which the oily ingredient would remain completely dissolved, or suspended in such a way that it would not separate. When chloroform liniment is mixed with other spirituous liniments the oil is at once thrown out of solution, and even when the mixture is vigorously shaken separation takes place so rapidly that the liniment is very unsatisfactory, and many medical men do not care to prescribe the combination known as A. B. C. liniment just on that account. One objection urged to chloroform liniment is that it does not keep well, and in order to obviate this Mr. Boa proposed to substitute soft paraffin in place of olive oil in the liniment of camphor. No doubt this is an effectual remedy in so far as the preservation of the camphor liniment is concerned, but it does not meet the other difficulty of separation. Another idea is to use aconite and belladonna liniments prepared with chloroform, as directed by the B.P.C. Formulary; but this again does not represent exactly what is required in A. B. C. liniment.

It occurred to me that if we used castor oil in place of olive oil in making the camphor liniment, we should at once have the very preparation we were in search of; and, speaking theoretically, we certainly ought to have it; but if, as is more than probable, we employ the tasteless Italian oil, it will be found that the actual result does not correspond with the theory. The Pharmacopoeia states that castor oil is soluble in 2 parts of rectified spirit; Squire says 1 in  $3\frac{1}{2}$ , and Fluekiger and Hanbury say 1 in 4; but the latter add that the solubility of the oil varies. I have tried several samples of Italian oil, and find that none of them are soluble at ordinary temperatures in 4 parts of spirit, and this fact explains why I failed to make a clear A. B. C. liniment with castor oil. I have not made use of the East Indian oil, having none at hand, but even if it answered the purpose in so far as solubility is concerned, it is probable that the odour would render its use objectionable.

I was finally led to employ a method which was suggested to me—viz., to use glycerine in place of oil, and A. B. C. liniment so prepared is perfectly satisfactory in every way. Of course it is impossible to prepare liniment of camphor with glycerine, seeing that chloroform does not dissolve glycerine, and *vice versa*, and therefore we must keep a stock of the A. B. C. liniment ready prepared (or be put to considerable trouble in making it when required); but where the preparation is frequently prescribed it is an advantage to have it ready. The following is the formula:—

Camphor .. ..	.. ..	.. ..	.. ..	.. ..	$\frac{1}{2}$ oz.
Chloroform .. ..	.. ..	.. ..	.. ..	.. ..	$2\frac{1}{2}$ fl. oz.
Liniment of aconite .. ..	.. ..	.. ..	.. ..	.. ..	5 "
" " belladonna .. ..	.. ..	.. ..	.. ..	.. ..	5 "
Glycerine .. ..	.. ..	.. ..	.. ..	.. ..	2 "
Dissolve and mix.					



## OUR TOWN TRAVELLER.

## SALICYLIC ACID.

OUR town traveller called on the London representative of a prominent firm of salicylic-acid makers the other day, to ask what had been the effect of the recent Glasgow trial. "Is ordinary salicylic acid a thing of the past?" asked our man, and the reply was: "So far we have not experienced any appreciable difference. You know, it makes no difference to us which we sell, and we never push one in preference to the other. Our orders for the ordinary salicylic acid run in hundredweights and half-hundred-weights; the purified we sell principally in 7-lb. parcels."

## GALLEN WORKS.

IT was a happy hit of Messrs. John Moss & Co. to select the title "Galen Works" for their factory. That was three years ago, and since then they have had the sincerest form of flattery bestowed upon them by the Pharmaceutical Society, who adopted "Galen Place" as the name for the old Pied Bull Yard, and we hear that a coterie of pharmaceutical Freemasons are appealing to the Prince of Wales to allow them to start a "Galen Lodge" of Freemasons. It will be remembered that when Mr. John Moss left the old firm in the city, his intention was to embark in a new line of business—the manufacture of galenicals for wholesale houses—and "what more appropriate name," said he to our traveller who called on him the other day, "for a factory which makes galenicals?" "Do you manufacture for wholesale houses, simply getting their drugs, and returning them as galenicals?" "Oh, no," was the reply; "we do very little of that—we manufacture and sell to the wholesale buyers. But come round the works, and see what we do." The works, by the way, consist of a large two-storey building, at one time used as an ultramarine factory. The engine and boiler houses are on the ground floor, where also the steam laboratories and the packing-room are situated. On the first floor there are an experimental laboratory, grinding-room, store-room, &c. Through all these apartments Mr. Moss took our representative, who noted that the capacity of the laboratories is taken up to the full by apparatus. The arrangements of the laboratory are very orderly, and all the work is under the personal superintendence of Mr. Moss and an accomplished young pharmacist. Our representative noticed that the arrangements for the preparation of fluid and solid extracts were extensive as compared with the provision for making tinctures and the like, and this led to a little conversation regarding the work done, in the course of which it was ascertained that concentrated infusions and tinctures are a subsidiary part of the business: a very large proportion of it is in preparations which require the use of heat. These include solid and liquid extracts, certain spirituous preparations, such as spirit of nitre and sal volatile, the more important artificial and natural fruit essences and juices, a few syrups, such things as pepsin, and a number of fine chemicals, including cerium compounds and terebene. The laboratories are very well equipped for such work. Of course they have only been gradually brought to their present state of perfection, for Mr. Moss took the buildings over early in July, 1887, and on the August bank-holiday following he had everything ready to begin work. Since then business has grown, and with its growth first a man and then a pan were added, until now there are twenty men employed in the works, and almost as many pans. One of the latter is a leviathan thing of several hundred gallons capacity, which is almost constantly in use for sarsaparilla extract. This pan is placed on strong standards about 8 feet high, and the diameter of the pan is certainly 6 feet. The rest are of all sizes down to the evaporating-dishes for small operations. It was observed that one set of pans was in use for extract of cascara sagrada. "You make a speciality of this, do you not?" said our representative to Mr. Moss, to which he cautiously replied, "We make a speciality of everything that we make. Cascara is one of our heavy articles. You see we advertise it in THE CHEMIST AND DRUGGIST, and we are heavy buyers—perhaps the heaviest on this side." Then followed an inter-

esting conversation regarding this popular aperient, in the course of which it transpired that aqueous infusions of the drug on evaporation deposit two resins, one hard and the other soft. Each is deposited at a distinct stage of the operation, and both possess aperient properties, yet the extract from which they are deposited is still powerfully aperient. There is a great deal of experimental work yet to do in cascara sagrada, and we may venture to say that it is receiving special attention in the Galen Works' experimental laboratory at present. It is worth noting, also, that Mr. Moss keeps in view the therapeutical side of the question, and also the alleged difference between new and old cascara sagrada. As bearing upon this, he handed our representative a sample of bark which was on the tree in August of this year, and which he is to have tried by a therapist, as well as chemically.

Although we merely commissioned our traveller to see how Mr. Moss's venture was succeeding, he appears to have spent most of his time talking about pharmaceutical subjects, and he excuses himself for that by reporting that he could see with his eyes that the thing was a success, and he was told that the firm is looking out for larger premises.

## HALF AN HOUR IN A TRUSS FACTORY.

MR. H. M. COLWELL, truss manufacturer, has old-fashioned looking premises at 116 Newington Causeway, S.E., where his grandfather established himself as a truss manufacturer in 1832, and as the business has been in the family since, Mr. Colwell remains here, and has lately opened a new factory at York Street, London Road. Our traveller went down there the other day to see a new truss—the "Colonial"—and while there he asked to see how trusses are made. He began, under Mr. Colwell's guidance, with the steel. This is received from Sheffield in the soft state, that for single trusses being in bands of the required size: but for the double ones long bands are bought, which are cut to the proper length. The first thing done with the single band is to bore two or more rivet-holes in the pad end, then the metal is bent by hand to the shape of the body and taken down to the tempering-room. Here a skilled workman makes up bundles of six, tying them with wire. These go, one bundle at a time, into a powerful coke furnace, the bundle being covered with a sheet of metal. When it attains a white heat, the bundle is removed and dipped into a tank of seal oil; then the bundle has to be untied, and two by two the springs go back to the furnace again where they are held until the workman judges they have reached the proper temperature; then they go into a tank of water, from which they emerge with the proper amount of elasticity. From the tempering-room the springs go up to the sewing-room. Here our traveller found a bevy of girl workers under the charge of a cheery-faced matron. Each girl has given to her a special piece of work, so that a truss passes from one to the other until it is complete. The foundation of the pad is a piece of cork screwed to the steel; the front of this is covered with several pieces of felt, then the whole is enveloped in chamois, and the top leather sewn to the pad by hand. It is here that the advantage of Mr. Colwell's new invention comes in. He replaces the top leather by an enamelled metal plate, which is attached to the steel by screws. This plate secures the chamois covering, and at the same time perfects the immovability of the pad—an advantage which cannot be obtained in the usual way. Our traveller watched all the operations from the cutting-room, where leather straps and coverings and mole-skin coverings are cut, through all the stages of machine and hand sewing. Of late years competition has become very keen in the truss trade, and to meet it and retain his Australian and home connection, Mr. Colwell explained that he has done away with piece-work, replacing it by division of labour at set wages, which excludes all possibility of sweating. His connection with the drug trade has all along been through wholesale houses, but the old-established retail business is still retained.

## AT THE OLD CIVET CAT.

THE Old Civet Cat in Cockspur Street is a very venerable old dame indeed, for it has carried on an odoriferous existence ever since 1739 at its present headquarters, to



which it transferred itself from Long Acre, its original abode. Mr. Walker, the present proprietor of the business carried on under the famous old sign, told our Town Traveller the other day, when we paid him a passing visit, that business was very brisk with him just now, and that this satisfactory state of things was likely to last until well in November, when, in the ordinary course of things, his trade would resume a quieter appearance until just after the new year, at which period renewed activity may be reasonably looked for. The firm of Bayley & Co. have recently placed upon the market a new soap, known as "Ecza," for which they claim particularly pronounced properties of healing skin-affections, eczema and the like. Messrs. Bayley do not profess that this soap is a low-priced one, though they recommend it as a cheap article. It retails at 2s. per tablet, and is certainly one of the pleasantest soaps one could wish to wash with. It is of a somewhat neutral grey colour, the firm avoiding, on principle, the use of artificial colourants in their manufactures, and it much resembles in outward appearance the spermaceti soap of the same makers, which also retails at 2s. per tablet. It may be partly on account of the very fact that their soaps are so high priced that Messrs. Bayley continue to do a large export trade in their goods even with the most protectionist countries, such as Russia and the United States, for customs duties do not, of course, affect high-class goods in the same proportion as cheaper ones. As an instance of the popularity of Bayley's soaps in the States, Mr. Walker mentioned that during the last few months one single American house had purchased 1,000 dozen of his spermaceti soap alone. The McKinley tariff has not affected any of his articles of export. As connoisseurs of a good toilet soap, Mr. Walker thinks the Americans stand highest, while the Russians come a good second. Everyone knows Bayley's perfumes, and most people are acquainted with their soaps, but it is not so generally known that the firm own a number of other toilet and medicinal specialties, many of them over a century and a half old. They claim whatever merit attaches to the pioneer manufacture of liquid blacking, and they still preserve copies of the *London Chronicle* of 1772 and the *Whitehall Evening Post* of 1778, containing their advertisements. Their book of recipes dates back up to 1701, when it was commenced by the forgotten originator of the firm, and some of the preparations still made according to those old formulæ continue to be used in several private families. Some of the scents also, such as the ess. bouquet and the "Maréchalle" can look back upon a career extending over more than a century. Of the former Mr. Walker told us an order of 200 dozen is now in course of execution for Russia. The house in Cockspur Street and the warehouse adjoining it are full of old associations. The latter was much wanted by George IV. for an extension of the Royal stables, but the Bayley *in esse* objected to the transfer, and mortally offended the First Gentleman in Europe, though his Majesty appears to have become reconciled to the firm subsequently, for we read that when he died ess. bouquet "avait obtenu sa faveur toute particulière." From the first-floor window of the house the Duke of Clarence used to watch the proceedings at the hustings when Westminster elections were in progress and the "Old Civet Cat" was the first house at which the celebrated actress, Lydia Foote, put up when she came to London, Mr. Bayley being her guardian.

#### MR. TRUEFITT'S MANICURE COURT.

IN response to an invitation our representative, a few days ago, paid a visit to Mr. H. P. Truefitt's "Manicure Court," at 13 Old Bond Street, to be initiated there in the mysteries of Dr. Ira Paul's system of nail-culture. The perusal of a pamphlet containing elaborate injunctions on the social and hygienic obligations to have one's nails manicured at regular intervals, and presenting illustrations of various instruments required for that purpose, described as cuticle-knife, cuticle-scissors, files, polishers, and so on, had caused our Town Traveller's cheek to blush with shame at the realisation of his own shortcomings in this important feature of the accoutrements of a gentleman. He therefore entered the Manicure Court prepared for the worst. Ushered into a spacious hall, luxuriously fitted with lounge seats, small oriental tables, mirrors, and heavy tapestry, our representa-

tive was requested to deposit himself upon a low easy-chair, and to place his right hand in a small glass bowl of tepid, perfumed, soapy water. For a few minutes he was left in this position, ruminating upon sundry awful diseases of the nail, known as *onychia*, *paronychia*, and *pieus mignatis*, the existence of which had been revealed to him by the pamphlet, and wondering with how many of these the manicuress (a comely young lady with the sweetest of smiles, the brightest of eyes, and the softest of peach-skin fingers) would declare him to be afflicted. Presently she approached, drew forward the heavy curtain, thus dexterously screening the corner from the ken of inquisitive glances, sat herself down close by his side on a small wicker chair still lower than his own, laid a soft cushion on her lap, placed his hand upon that cushion, and proceeded to dry his fingers, meanwhile securing the left hand in another rose-scented bowl. The cuticle-knife was then deftly brought into operation to loosen whatever fragments of skin might exist at the base of the nail, and our Town Traveller soon found what the pamphlet calls "that much-prized ornament the lunula or half-moon" shining in quiet lustre upon his finger-tips. The cuticle-knife was succeeded by a pair of thin scissors with curved points, then the nails were carefully filed with a small steel file, and subsequently bevelled with an emery board, about two inches long by half an inch in width. Our Town Traveller's fingers were now ready for the "beautifying process." This consists in the first place, in the application of a cleansing fluid by means of a small orange-wood stick; next the nails are rinsed and a small instrument known as the polisher, consisting of a wooden handle and chamois leather pad, upon which some polishing powder is applied, is quickly rubbed over them; then the finger-tips are again immersed in water, a final polish is applied, and after an operation lasting about half an hour, the visitor leaves the Manicure Court the happy possessor of nails pellucid with a brilliant transparent enamel, which should endure, with care, for eight to ten days, but can hardly be expected to last so long in the case of an individual whose duties are so multifarious and laborious as those of a London journalist.

Mr. Truefitt started his Manicure Court, he informed us, at the urgent request of many of his American customers, male as well as female, for the masculine descendants of stern George Washington and "old Abe" are as much addicted to the manicuring process as any of their woman-kind. Chance threw an American "manicure woman" into Mr. Truefitt's way about two years ago, and he fitted up the court in a temporarily vacant room adjoining his premises, apparently not thinking much of the venture himself. But it "caught on" with great rapidity, and there are now three manicuresses constantly at work, the number of visitors in the slack time being about thirty a day, "quite as many gentlemen as ladies," we were told. Five shillings is the charge for one operation, or 3*l.* 3*s.* for a series of fifteen visits. The manicure instruments, as well as the ingredients employed in the process, may be purchased at the establishment by chemists, and those who have a *clientèle* likely to indulge in such luxuries as the manicure process might well consider whether the sale of these preparations could not be made a profitable extra.

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A LOVER'S SPAT.—"Don't stick to me so," said the pill-mass. "Then don't be so soft on me," snapped back the pill-tile.—*Pharm. Era.*

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CHLORAL-POISONING. — A laundry proprietor, named Leonard Kirby, 77 years of age, died at Scarborough on Friday from the effects of an overdose of chloral. He had been depressed and suffered from sleeplessness. Some time ago he was attended by Dr. Horne's assistant, who gave him sleeping draughts, and about a month ago sent a 9-oz. bottle of chloral. The doctor gave Kirby's daughter strict instructions as to the dose. Her father, however, did not ask for the medicine, and she put it away in a room which the old man had not entered for nine years. She took this precaution as he had shown a suicidal tendency. On Friday, however, he was found sitting in a chair in an unconscious state, with the empty bottle and a glass beside him. There seemed no doubt he drank the bottle-full at a draught. Death ensued shortly after he was found.



## Personalities.

MR. W. C. REYNOLDS, son of Mr. F. Reynolds, Harrogate, has obtained the entrance exhibition in the pharmaceutical department of the Owens College, Manchester.

MR. S. V. MORGAN, one of the proprietors of THE CHEMIST AND DRUGGIST, will be in the United States and Canada during November, and may be addressed care of Mr. C. F. A. Hinrichs, 29 Park Place, New York.

AMONG the six retiring councillors at Ryde, Isle of Wight, who are re-elected without opposition are two chemists—Mr. W. Gurnell, who has sat for the East Ward six years; and Mr. H. H. Pollard, who has represented the West Ward nine years.

MR. W. BUTCHER, homœopathic chemist, of 315 Regent Street, and Blackheath, has taken his son, Mr. William Frederick Butcher, pharmaceutical chemist, F.C.S., into partnership, and the business will be conducted under the style of W. Butcher & Son. An analytical laboratory will be added, and Mr. Butcher, jun., will give private instruction in chemistry.

## Trade Notes.

DAVY & SON, chemists, have removed from Wilton Street to the Molesworth Pharmacy, Edgumbe Place, Stoke Devonport.

MESSRS. G. VOGT & Co., of 19 Laurence Pountney Lane, are offering a show-card representing their various perfumes as ballet-girls.

MR. JOSEPH WILSON, chemist, Chislehurst, supplies his popular application "Anti-stiff" in boxes fitting into a box-lid well illustrated with sketches of athletic sports. The arrangement makes an effective show-card.

We gave Colonel Cardwell's new binocular two titles last week—"Unique" and "Ubique." Although we might consider it entitled to both names, it is as well to say that "Ubique" is what Messrs. Perken, Son & Rayment call it.

GLYZINE, made by the Glyzine Company, at Wicklow Street, Gray's Inn Road, is a glycerine cerate, of stiff consistence and pleasantly perfumed. It seems likely to be a useful skin application, especially for the winter.

MESSRS. HERTZ & COLLINGWOOD, of 101 Leadenhall Street, inform us that, owing to the reduced prime cost of the article, they have correspondingly reduced the price of Jensen's "Iceberg" cod-liver oil to retailers. The 10-oz. bottle, formerly retailed at 2s., is now sold at 120s. per gross.

THE MCKINLEY BILL.—Messrs. Howard, Jones & Hale, of 15 and 16 Cullum Street, E.C., send us a copy of the new American tariff in pamphlet form. They sell it at 2s. The pamphlet contains the full text of the Act. It would have been still more useful if a table had been added showing how the new duties compare with the old ones.

MESSRS. THRELFALL & Co. (LIMITED), of Liverpool, are erecting a large mineral-water and bottling establishment adjoining their brewery at Trueman Street, Liverpool. The whole of the fitting-up has been placed in the hands of Messrs. Bratby & Hinchliffe (Limited), of Manchester, whose plans and estimate were accepted in competition with several other aerated-water engineers.

COCA-BYNIN.—Messrs. Allen & Hanburys have prepared an agreeable combination of malt-extract (Bynin) with an active extract of coca, and offer this as suitable for the extemporaneous preparation of coca-wine. It may, of course, be taken alone, but the idea is that a suitable dose of it will be added to a glass of wine, the consumer selecting his own vintage. Of course, chemists can sell this preparation without a licence.

MR. H. SILVERLOCK sends us a bewildering variety of samples of his almanacks and calendars for 1891, all pro-

duced in the elegant style for which his house is famous. Besides the small simple calendars in colours, there are the "Sachet Almanack," the "Presentation Almanack," and the "Court Calendar"—all giving useful matter and appropriate advertisements. Mr. Silverlock also brings out this year several hanging calendars, artistically produced. One, entitled "Time's Flight," presents on each monthly sheet a very clever humorous sketch, setting off appropriately chosen and skilfully worded chemists' advertisements.

## NEW COMPANIES.

D. GLASGOW HUXLEY & COMPANY (LIMITED).—Capital of 1,000l., in 10l. shares. Objects: To carry on business as wholesale, retail, manufacturing, and dispensing chemists and druggists, patent-medicine vendors, and oil and colour men. Registered without articles of association. The following first subscribers take one share each: D. Glasgow Huxley, Sheffield, drug-merchant, &c.; H. D. Huxley, Sheffield, drug-merchant; H. Barrow, Attercliffe, engineer; Walter Batly, Attercliffe, engineer; Isabella Huxley, Sheffield, confectioner; Eliza Huxley, Sheffield, confectioner; Mary Howison, Sheffield, confectioner.

THOMPSON DRUG COMPANY (LIMITED).—Capital of 4,000l., in 5l. shares. Objects: To acquire the business of patent-medicine vendor, drug-merchant, herbalist, and general store keeper, carried on at 291, Stamford-Street, Ashton-under-Lyne, by D. C. Hill, trading as "J. & J. Thompson & Co." Registered without articles of association. The following subscribers take one share each: Samuel Walkden, Norden, near Rochdale, farrier; Abraham Hill, Norden, no occupation; Benjamin Shepherd, 54 Burlington Street, Ashton-under-Lyne, chemist's assistant; J. W. Walkden, Norden, farrier; N. Hoyle, Norden, cotton-spinner; A. Barraclough, Rochdale, tea-merchant; D. C. Hill, Ashton-under-Lyne, patent-medicine vendor.

## MARRIAGE.

JOHNSTON—MATHER.—At St. Giles's Cathedral, Edinburgh, on October 23, by the very Rev. J. Cameron Lees, D.D., LL.D., John Johnston, jun. (of Messrs. Geo. Reid & Sons, chemists, Aberdeen), to Joan, fifth daughter of the late Robert Mather, Druid Temple, Inverness.

## DEATHS.

ELLIOTT.—On October 22, Mr. John Gartside Elliott, chemist and druggist, of 196 Gibraltar Street, Sheffield. Aged 67. Mr. Elliott was a very popular and highly-respected tradesman, of generous instincts, though of somewhat eccentric habits. He was the youngest son of Ebenezer Elliott, the famous Corn-law Rhymers.

NICHOLSON.—On October 23, at Carlton House, Herne Hill, S.E., Edward Chambers Nicholson, F.C.S. Aged 63. The late Mr. Nicholson was an eminent practical chemist, to whom is due a large share of the credit of developing the great coal-tar colour industry. One of the first students at the Royal College of Chemistry in 1845, Mr. Nicholson was selected, together with his fellow-student, Sir Frederick Abel, by the founder of that school, Professor von Hofmann, to assist him in the pursuit of his earlier researches in organic chemistry. After a few years Nicholson became associated with the conduct of a small chemical manufacturing business, which speedily developed and acquired, through his work, a very high reputation for the production of rare chemical compounds upon a manufacturing scale. Directly after the foundation of the coal-tar colour industry had been laid by the researches of Hofmann and the brilliant discoveries of Dr. Perkin, the firm of Simpson, Maule & Nicholson produced upon a large scale, and of a high degree of purity, certain tinctorial tar derivatives, which speedily acquired great importance. He was the working head of the firm (now Brooke, Simpson & Spiller, Limited), from which after a short but very successful career he retired, leaving behind him a reputation of exceptional talent as a chemist.



## Scientific Notes:

*On Chemistry, Pharmacy, Botany, Materia Medica, &c.  
Original, Selected, and Translated.*

### ALDEHYDE

gives a yellowish precipitate with Nessler's reagent, which gradually darkens through reddish brown to black. It can be distinguished from the precipitate caused by ammonia by the addition of potassium cyanide, which dissolves the ammonia precipitate, but turns the aldehyde precipitate black. Ordinary ether and chloroform are always found to contain aldehyde, but can be completely purified therefrom by treatment with Nessler's reagent and distillation.—Crismer, in *Journ. Chem. Soc.*

### IODIDE OF AMMONIUM.

ACCORDING to Weissenberger, this salt can be prepared extemporaneously for photographic purposes in the following way:—Ten grms. of potassium iodide are dissolved in 20 c.c. of water, and mixed with 4 grms. of ammonium sulphate dissolved in 30 c.c. of water. Absolute alcohol is now added until the volume of the liquid is 218 c.c.; potassium sulphate is precipitated, and the liquid contains 4 per cent. of ammonium iodide.

### ADULTERATION OF PHENACETIN.

PHENACETIN is said to be adulterated with antifebrin sometimes. If that be so, one can easily detect it by boiling 5 grs. of the sample in a drachm of water; cool and filter. Boil the filtrate with a little nitrate of potash and dilute nitric acid, then add a few drops of solution of nitrate of mercury, and boil again. If no red colouration appears antifebrin is either absent, or present in less proportion than 2 per cent.

### TEST FOR ALBUMEN.

ACCORDING to Dr. Adolf Jolles, of Vienna, albumen can be detected in urine with certainty by the following method described by him in the *Pharmaceutische Post*. Upon 8 to 10 per cent. of the urine pour an equal volume of strong hydrochloric acid without shaking, then from a glass pipette allow two or three drops of solution of chlorinated lime to fall into the tube, and if albumen be present to the extent of as little as 1 in 10,000, a white ring is formed at the junction of the urine and the acid. According to Dr. Jolles the test is far more delicate and certain than the usual "nitric acid and boiling" one.

### SOLUBILITY OF SALICYLIC ACID IN SPIRIT.

EXPERIMENTS recently made by Immendörffer show that the solubility of salicylic acid in spirit undergoes a remarkable change when a certain dilution of the spirit is reached. Thus, one part of the acid requires for solution 4.7 parts of 80° alcohol, 6.7 of 70°, 10 of 60°, 19 of 50°, 49 of 40°, 206 of 30°, 338 of 20°, and 547 of 10°. These are the figures given in the *Pharmaceutische Zeitung*, but it may be noted that the German Pharmacopœia gives the solubility in water as about 1 in 500 (B.P. 1 in 500 to 700). Perhaps Immendörffer is right with his 10° spirit figure; if so the German Pharmacopœia must be wrong in its factor.

### JALAP.

SOME time ago Mr. R. A. Cripps reported upon the resin strength of thirty-four samples of jalap, showing (see THE CHEMIST AND DRUGGIST, November 4, 1888, p. 710) that many samples contain less than the pharmacopœial amount of resin, 10 per cent. M. J. Paul Suess has been doing the same thing in America with half-a-dozen samples, the results as published in the *American Journal of Pharmacy* showing that the specimens yielded an average amount of 10.26 per cent. of alcohol-soluble resin, the lowest being 7.28 per cent., and the highest 14.5 per cent. We note that the prices varied remarkably; thus, a root which cost 22 cents per lb. yielded 9.20 per cent. of resin, but only 11 per cent. of resin was obtained from a root which cost 80 cents per lb.

## Trade Report.

*Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.*

*It should also be recollected that for many articles the range of quality is very wide.*

42 CANNON STREET, E.C., October 30.

THE CHEMICAL UNION.—We hear that a meeting of the committee of the Chemical Union was held in Liverpool on Tuesday, at which it was decided that the new company should be registered to-day (Thursday). The issue of the prospectus is expected on Saturday.

ACIDS.—*Acetic* acid is rather lower for the higher grades—above 70 per cent. *Citric* remains quiet, but unchanged. It might be possible to buy odd lots at 1s. 3½d. per lb., but for quantities more would have to be paid. We make 1s. 3½d. per lb. the nearest quotation; but the advance in the price of concentrated juice should be kept in view when estimating the position of this article. *Carbolic* flat and dull, although makers are said to be very busy. Usual quality crystals, 34s. to 35s. in drums, could now be had, however, at 6½d. to 7d. per lb., which is rather lower. *Tartaric acid* dull and without much business. The nearest price is 1s. 2¾d. to 1s. 3d. per lb. for crystals, according to brand. Some makers ask 1s. 3½d. per lb., but they are out of the run at present. *Tannic* acid has been advanced in price about 10 per cent. *Gallie* and *Pyrogallie*, however, are still unchanged.

ALOES.—Of *Cape* aloes 52 packages were offered to-day, and some of these sold at a decline of about 1s. to 1s. 6d. per cwt., although the quality was not so good as that shown at the last auctions. Fairly good bright hard brought 21s. to 21s. 6d., dull and drossy 17s. to 18s. 6d. per cwt. An arrival of 41 cases took place this week from Mossel Bay. In New York *Curaçao* aloes are reported to be still arriving freely, and prices have further declined. At to-day's drug sales this variety was moderately well represented by 355 cases, of which 200 sold at about previous rates—bold bright capey gourds, 24s. to 25s.; fair capey in cases, 13s. 6d. to 14s.; and ordinary dull and dark, 13s. to 15s. per cwt. Some fine bright red liver aloes were shown, but of these nothing was sold; they were bought in at 70s. per cwt. Of *Socotrine* aloes one case good hard yellow, of rather poor flavour, in skins, sold at 97s. 6d. per cwt.; common dark aloes in kegs were bought in at 23s. per cwt. Of 9 packages *Zanzibar* 5 were sold at 70s. for good red treacly aloes, sour flavoured, in tins; for the rest an offer of 60s. per cwt. was declined.

AMBERGRIS.—Several parcels were shown, but they did not comprise anything of fine quality. For 9 oz. fair flavoured dark chips an offer of 62s. 6d. per oz. is to be submitted, while one tin of 26 oz. black ambergris, of poor flavour, is said to have sold at 51s. per oz.

ANISE.—At to-day's auctions, 36 bags fair *Italian* were bought in at 30s. per cwt.; 24s. would probably be accepted. A parcel of *Russian* anise is held for 17s. per cwt., and a bid of 16s. 6d. was declined. Good *Spanish* anise is worth 32s. per cwt. c.i.f. London, but lower qualities are weaker.

ANNATTO.—Twelve barrels new *seed* from Ceylon, fine red colour, are held for 3d. per lb.; for a somewhat darker lot a bid of 2½d. per lb. was refused. For 4 cases ordinary dull and colourless 1d. per lb. would be taken.

ARSENIC.—The present price for best *white* powder in kegs is now 14s. 3d. to 14s. 6d. per cwt., according to quantity. *Red* arsenic is worth about 30l. per ton.

BALSAMS.—*Canada* balsam is reported dearer in America. New York quotes barrels at 1s. 3d. and cases at 1s. 4d. per lb., c.i.f. At to-day's auctions two 120-lb. kegs were held for 1s. 3d. per lb. *Peru* balsam is reported somewhat firmer again this week, owing to a resumption of speculation.



on the Continent, but three packages shown to-day could find no buyers at 5s. 3d. per lb., although 5s. 9d. was paid a few weeks ago for similar quality. In New York *Copaiba* is arriving more freely. At to-day's auctions 7 casks rather cloudy Maranhão were bought in at 2s. 4d. per lb., a ½d. less being named as the limit.

**BENZOL.**—Business has been done at 4s. 6d. for 90 and 3s. 6d. for 50-per-cent. for delivery all over next year, but it would be difficult to buy at those figures now, and it is believed that the chances of a further advance in the price of the article are very good.

**BUCHU.**—At to-day's auctions only two bales dull yellowish round leaves were offered, and sold at 6d. per lb., which marks a fresh advance.

**CALABAR BEANS.**—Small sales are still being made in Liverpool at 5½d. per lb.

**CAMPHOR (CRUDE).**—There is no change in the market; business is very quiet, and the nearest spot price would probably be 160s. for good *Japan*, but at to-day's auctions a bid of that amount was said to be made for 12 tubs of very good dry quality, *via* Hamburg, and refused, the parcel being bought in at 170s. *China* camphor nominal.

**CAMPHOR (REFINED).**—Steady at 1s. 9½d. to 1s. 9¾d. for foreign, and 2s. per lb. for English bells.

**CANTHARIDES.**—Steady, without change, and 3s. 6d. would probably buy good quality. At to-day's auctions 2 casks, 2½ cwt. each, good bright *Russian* were shown; 3s. 5d. was refused for this, the owner standing out for 3s. 6d.

**CARDAMOMS.**—Of 228 packages offered to-day (mostly medium grades) 124 sold, with excellent competition, at full prices, and occasionally in the case of good parcels at an advance of about 3d. per lb. *Tellicherry*, small to medium, brought 1s. 3d. *Mangalore*, good plump but yellow, M.M.M. mark, are said to have sold privately at 2s. 9d., and an offer of 2s. 8d. was refused to-day; common pods, small to brown, of the same mark, brought 1s. 8d. *Ceylon Malabar*: medium to bold pale and full, 2s. 6d. per lb.; medium to bold round brown, 1s. 9d.; smaller ditto, 1s. 7d.; medium plump round, 1s. 6d.; small to medium yellow, partly specky, 1s. 10d.; dull grey small to medium but plump, 1s. 3d. to 1s. 6d.; and very dark brown, but fair size, 1s. 1d. to 1s. 2d. *Mysore*: medium to bold plump and pale, 2s. 9d. to 2s. 10d.; good round and long mixed pale, 2s. 1d. to 2s. 4d.; smaller and greyer, 2s.; small to medium yellow, 1s. 7d. to 1s. 8d.; ordinary medium brown and split, 1s. 4d.; dull pale medium greenish, 1s. 2d.; long thin and small, 9d. to 1s. 1½d. *Seeds* sold at from 1s. 6d. to 1s. 8d. per lb.

**CASCARA SAGRADA.**—Two parcels, both imported from San Francisco, were offered at to-day's auctions. One of these, of 15 bags fair brown quilly bark, sold cheaply at 33s. per cwt.; for the other, 30 bags of good thin silvery quality, an offer of that figure was refused. A strong export demand is reported from New York under date October 17. Good thin bark still offering at 35s. c.i.f., from New York, or at 32s. c.i.f. (sailer-shipment), from San Francisco.

**CASCABILLA.**—Rather dull of sale. At to-day's auctions 55 bales were shown, but only 5 found buyers, at 23s. for damaged, dusty, and woody. The rest was bought in at 30s.

**CASSIA FISTULA.**—Ten cases, of 276 1lb.-tins each, imported *via* Amsterdam, sold at 16s. per cwt. to-day.

**CASTORUM.**—1,200l. worth, which will probably be sold at auction in about six weeks, have arrived from Canada this week.

**CHLORAL HYDRATE** has been reduced in price owing to increase in competition, more than one new maker having started recently.

**CINCHONA.**—One bale (40 lbs.) of flat red bark from South America, small pieces of good colour, sold at 4s. 2d. per lb., a comparatively cheap price. Of flat *Calisaya*, 78 serons were offered, but all bought in; good bold bright is held for 1s. 7d. per lb., rather woody and rough ditto at 1s. 6d. per lb. *Loxa* bark in small supply. Seven serons broken rusty quill were bought in at 1s. 6d. to 1s. 8d.; for an ordinary lot an offer of 1s. per lb. was refused. Broken brown *Huanoco* quill sold at 8½d. per lb. For 10 bales very bold flat but

damaged *Carthagena* 7d. is the price, 5½d. per lb. being refused for this. A parcel of fine bold mossy silvery grey *Guayaquil* quill (MOZ) is held for 1s. 6d. to 1s. 8d. per lb.

**COCAINE.**—There is still some offering at 16s. 6d. (hydrochlorate), but 17s. is the price generally asked. The stock of cocaine in Hamburg seems to have been practically cleared out, and the German manufacturers are now said to be buying what odd lots are available in London.

**COCA LEAVES.**—Two parcels from South America were offered to-day. The first consisted of 2 bales broken thin pale *Truxillo* leaves of good flavour, for which 1s. 1d. to 1s. 2d. per lb. was paid. The second showed 15 bales poor small dark thick leaves, all damaged, for which from 3d. to 7d. per lb. is asked. Two boxes dark strong small thick leaves from *Ceylon* retired at 1s. per lb., 4½d. being declined. A parcel (valued at 33l.) of *Java* leaves has arrived this week.

**COCCULUS INDICUS.**—Ten bags of good quality from Cochin sold at 13s. per cwt. to-day.

**COLOCYNTH.**—Of 26 cases *Turkey* good bold white partly broken apple, one sold at 1s. 2d. per lb., which is a steady price.

**COWHAGE.**—A parcel of 72 12-lb. tins, imported in May, bright colour, but rather seedy and strong, was offered to day and bought in, ¾d. per oz. being the best bid obtainable.

**CREAM OF TARTAR.**—Rather easier: best white French crystals at 97s. 6d. to 98s.; and powder at 99s. per cwt.

**CROTON SEED.**—A parcel of 33 bags bold dark seeds, from Ceylon, offered as "castor seeds," are held for 10s. per cwt. For another lot of 30 bags of somewhat dull quality 12s. per cwt. is wanted.

**CUBEBS.**—Towards the end of last week some lots changed hands privately at 18l. per cwt. for dusty, stalky, and shrivelled berries, showing some decline in values. Three parcels, altogether 61 bags, partly dark, from Batavia, partly *via* Amsterdam, were all bought in to-day, all very small shrivelled dusty and specky, at 18l. to 18l. 10s.

**CUMIN SEED.**—Several lots shown at the auctions to-day were bought in, and the market is very dull. Twenty bags wormy *Barbary* held for 18s., and a lot of ordinary low *Bombay* also for 18s. per cwt. Good quality *Malta* is said to be selling privately at 22s. per cwt.

**CUTTLE-FISH.**—One 2-cwt. cask pale to broken and dusty sold to-day at 2½d. per lb.

**DRAGON'S BLOOD** is held for full values. Ten cases finger, shown to-day, retired at 9l. 10s. for broken finger, partly out of reed, fine colour (7l. 5s. refused); while good to rather dull colour was bought in at 6l. 10s. to 7l. 10s.

**ELATERIUM.**—Good quality squares may be had at 2s. 6d. per oz., and a lot of common dark is offered at 1s. 6d.

**ERGOT OF RYE.**—The new crop of Spanish ergot finds a fair sale at 1s. 3d. for good bold bright quality, old and wormy Spanish bringing 1s. to 1s. 0½d. per lb.

**FENUGREEK SEED.**—Good *Magadore* is still worth 6s. 6d. per cwt.; about 8 cwt. loose common pale and stony sold to-day without reserve at 5s. per cwt.

**GAMBIER.**—Block has risen in value this week, spot having sold first at 21s. 10½d., and afterwards at 22s. 6d. per cwt.; November-December at 22s. 1½d. per cwt.

**GAMBOGE.**—Of 10 cases offered to-day 8 sold at a renewed slight advance, partly run pipe, but mostly small pieces; partly ricey, partly good bright colour, 12l. per cwt. For 2 cases dull-coloured ricey lump an offer of 9l. 12s. 6d. was refused.

**GENTIAN ROOT.**—Sixteen bales fair quality from Bordeaux sold at 15s. 6d. per cwt.

**GINGER.**—The market for *Jamaica* ginger is fairly steady. Of 63 barrels offered at the spice auctions, the bulk sold at 73s. to 78s. for ordinary to fair medium washed. *Cochin* ginger very slow of sale. At the auctions only 130 packages were offered, and all bought in. *Bengal* also neglected. *African* ginger is reported to be selling at 20s. in Liverpool; for 40 bags offered to-day here 21s. is asked.



**GUINEA GRAINS.**—A parcel announced for sale to-day was withdrawn. In Liverpool small sales are still being made at 30s. per cwt.

**GUM ARABIC.**—Several parcels were shown at to-day's auctions, but the majority was bought in. Some *Cape* gum sold at excessively high figures; small palish frosted drop, 6l. 15s.; bolder, but of dull colour, 5l. 10s.; pale dust, 57s.; brown drop and dark pickings, 41s. to 60s. per cwt. Nine cases dull grey tears from Alexandria are held for 8l. per cwt. *East Indian* gums are very firmly held, and it is thought that, if the statistics for the present month prove favourable, a considerable speculative demand may arise.

**GUM BENZOIN.**—Of *Sumatra* gum 141 cases were offered to-day, and of these 70 sold with brisk competition at very full prices, and the best lots at a slight advance, fine pale almondy seconds, fairly packed, and of strong flavour, at 10l., rising to 10l. 7s. 6d. Fine almondy and well packed, but old fracture and discoloured, is held for 9l. 7s. 6d., an offer of 8l. 15s. not being entertained; fair almondy seconds, rather red borders, sold at 7l. 15s. to 8l., and ordinary thirds very false packed at 92s. 6d. to 95s. per cwt. Of *Siam* gum 20 cases sold without reserve at lower rates, though the price was better sustained than might have been expected. Fine clean rather small almondy, blocked and loose mixed, sold at 14l. 15s., dull grey siftings in block at 5l. 10s. to 5l. 12s. 6d., and a parcel of darker ditto at the very high price of 5l. 15s. per cwt. All of this was purchased by one firm. For 25 cases fair almondy glossy *Penang* 5l. 2s. 6d. was refused.

**GUM ELEMI.**—Four cases *Manila* of good flavour but very dirty, dark, and hard were bought in at 50s. per cwt., one large case in matting from *Bombay* showing orange-coloured pieces was bought in at 35s. per cwt.

**GUM EUPHORBIA.**—Of 20 serons small clean yellow drop and dust, 10 sold at 20s. per cwt., another parcel of 12 serons small and very dusty stony mixed brought 12s.

**GUM MYRRH.**—Rather dull brown *Aden* sorts are held for 72s. per cwt.; good coarse siftings at 59s. per cwt. A parcel of brown siftings and small drop sold to-day at 65s.

**GUM TRAGACANTH.**—At last Friday's periodical auctions prices were from 5s. to 10s. dearer for ordinary gums, while the better grades realised very full figures. Several hundred packages *Syrian* gum sold "without reserve" at 9l. 7s. 6d. to 10l. 5s. for seconds; thirds, 6l. 10s. to 8l.; fourths, from 6l. down to 65s.; and pickings, at 25s. per cwt.

**HONEY.**—*Jamaica* is several shillings dearer as compared with the last auctions at which it was offered, and brought from 1s. to 2s. over the prices which have recently been paid privately; 7 packages sold, fair liquid amber at 41s. to 42s.; rather thin at 40s. per cwt. In America there has been a strong demand, we hear, for *Californian* honey. The fine white grade has all been taken up, and the best quality now offering is light amber, for which holders ask 41s. per steamer from New York, or 37s. 6d. per cwt. per sailer from San Francisco.

**IPECACUANHA.**—Thirty-nine packages were shown at to-day's auctions, and of these 25 sold, the first parcel, which was the best as regards quality, bringing steady rates, the second being perhaps a shade weaker. Sound root sold at from 7s. 11d. to 8s. 1d. for rather wiry to fair; and at 8s. 2d. for good stout reddish. Damages at from 8s. 2d. down to 7s. 10d. per lb.

**JALAP.**—Ten bales were shown to-day, and of these 2 sold at 1s. 11d. per lb., which showed a slight reduction. The quality was fair, although mixed with very small. The broker would not go on at that figure, and another parcel is held at 2s. 2d. per lb., which is the price generally asked. Small lots are constantly arriving in New York, but the quality as a rule leaves much to be desired. Good *Vera Cruz* tubers are not offering below 2s. per lb., c.i.f.

**KAMALA.**—Two cases fair quality sold at 6½d. to-day.

**KOLA NUTS.**—Unaltered and very dear. Of three bags offered to-day two sold; dry, partly mouldy at 2s. 5d. to 2s. 6d. For a lot of wormy kolas 2s. 6d. was named as the lowest price.

**KOUSSO.**—One bale of fair coloured loose and dusty, which was offered at the last sale, was again bought in to-day, the limit having been raised, meanwhile, to 1s. 6d.

**LIQUORICE.**—For 10 bales powder imported *via* *Marseilles* 16s. was refused at auction to-day; *Russian* decorticated of good quality is still held for 25s. per cwt., but the figure could not be obtained to-day.

**LYCOPodium.**—New *Russian* has advanced somewhat in price, the quotation being now 150s. to 151s. c.i.f. terms.

**MERCURIALS.**—Prices remain as quoted last week—viz., on the basis of 3s. 8d. per lb. for *calomel*. *Red precipitate*, the price of which was already lowered 1d. some time ago to meet foreign competition, is not included in the recent reduction, but English *Vermilion* has come down 1d. per lb. since last week, and is now held for 3s. to 3s. 3d. per lb. according to quantity, the lower price being per 30 or 50 lb. bag as a minimum.

**MUSK.**—Of *Tonquin* pods 12 caddies first pile were offered to-day, and of these 6 sold at about 1s. advance on last rates fine small to bold well-trimmed but damp pods bringing 82s. 6d. to 83s. 6d. per oz., small to bold old-fashioned and very skinny pods 59s. 6d., more skinny ditto 56s. per oz. Seven caddies of third-pile pods sold partly at 1s. 6d. to 2s. advance; good blue skin 64s. to 65s., ordinary damp and skinny at 28s. per oz. *Cabardine* trimmings brought 1s. 9d. per oz., and several bottles low *grain* musk were bought in.

**MUSK SEED.**—Four 120-lb. boxes were bought in at 6d. per lb. to-day. The price is 5½d. per lb.

**NUX VOMICA.**—For 168 bags from *Bombay*, small fairly bright silky, 10s. 6d. per cwt. is wanted, but they were not competed for.

**OIL (ALMONDS).**—Owing to the continued rise in the raw material, the price of English-made sweet oil has again been advanced—this time to 1s. 10d. per lb., and *Pallid*. to 2s.

**OIL (CASTOR).**—Twenty cases *Italian* oil, from *Genoa* were bought in at 5½d. per lb. at to-day's auctions, while 25 cases yellow *Cocoonada* in slightly rusty tins sold at 3½d. per lb., a steady price. For next year's delivery *French* castor oil is quoted somewhat lower from *Marseilles*; pharmaceutical oil at 34l. 10s., first pressings at 31l.; and second pressings at 30l. per ton, f.o.b. London terms would come about 20s. dearer. In Liverpool the market remains flat and very quiet. *French* oil of first pressure is held for 3½d. to 3¾d. per lb.; *Calcutta* seconds, 3¾d.; and *Madras* oil at 3¾d. per lb.

**OIL (MYRBANE)** is still to be had at 7d. to 8d. per lb. for fair quality, but, in view of the position of benzol, an advance is not improbable.

**OILS (ESSENTIAL).**—American oil of *Peppermint* is somewhat easier on our market, H.G.H. having sold at 13s. 6d., and subsequently at 13s. 4½d. per lb. this week, but the importers are still very firm, and in New York prices are at least fully maintained. At to-day's auctions 5 cases H. and P. oil were held for 12s. 9d. per lb. *Japanese* oil steady; fair quality, 4s. 9d.; white, 5s. per lb. *Mitcham* oil is advancing, and there is now very little offering at 22s. per lb. for fine quality. Most holders refuse to sell at that figure. *Menthol* unchanged. Of *Cajuput* oil 31 cases (24 to 25 bottles each) were shown to-day; 3s. 10d. per bottle is the price for good quality. *Star-anise* has sold privately to a small extent at 6s. 6d. per lb. for good China, and at to-day's auctions 6 cases good congealed, out of a parcel of 20, sold at that price. *Tonquin* oil is not offering at present; the new crop is due shortly, and in anticipation of this quotations are nominal. As regards Italian oils, *Bergamot* is somewhat easier; but *lemon* is scarce, and likely to advance further, as only a very small part of the small lemon crop will be available for oil-pressing. *Citronella* stationary—tins at 13½d., bottles at 2d. per oz. *Lemongrass* steady, at 1½d. to 1¾d. per oz. on the spot. To arrive, 200 cases sold this week at a fraction below 1½d. per oz. c.i.f. terms. *Cassia* firm, with small sales at 3s. 9d. to 3s. 10d. per lb. Fisher's *Patchouly* is held for 1s. 8d. per oz.; and the same brand of fine water white *Nutmeg* oil at 9½d. per oz. Ordinary nutmeg oil from *Java* bought in at 5¾d.



**OPIUM.**—Our market is firm, with a fair amount of business passing. *Karahissar*, at 12s. 6d. to 13s. *Salonica* and *Tokat*, at 13s. for old crop and 14s. per lb. for new crop, with a fair amount of business in the former; druggists' seconds, 11s. 6d. to 12s. per lb., and *Persian* up to 14s. per lb. for the best. A telegram from Smyrna announces, we understand, that 200 cases *Karahissar* (a very large line) were sold to-day at 12s. per lb., or somewhat below the recent sale of a much smaller lot. We hear from Smyrna, under date October 18, that a good deal of business was transacted in the week closing on that day. American dealers and manufacturers had bought largely at 11s. 1d. to 11s. 2d. per lb. for *tale quale* opium for manufacturing purposes. Business had also taken place in soft selected *Karahissar* (for the Dutch Indies and Cuba) at 12s. 5d. per lb. (12s. 8d. f.o.b.). With regard to the winter sowings, it is reported that rain is greatly needed. The arrivals from the interior on October 18 were about 1,180 cases, against 1,400 in the corresponding part of the previous season.

**ORANGE-PEEL.**—Rather dark to fair gelatine *Malta* is held at from 6d. to 8d. per lb.

**ORRIS ROOT.**—Prices still show a tendency to further increase, 96s. 6d., f.o.b. Leghorn, being quoted for best select *Florentine*, of which the supply is exceedingly small. Twenty-five bags *Italian* root, small to medium, dull and yellow in colour, sold to-day at 40s. to 47s. per cwt., subject to approval.

**FAREIRA BRAVA.**—Sixteen bales of genuine quality, partly stout, partly thin, were shown to-day, but there was no bidding even when 40s. per cwt. was suggested.

**POPPY-HEADS.**—The 10 bags sea-damaged *German* poppy-heads, dark and small mixed, which were offered at the recent auctions, were sold to-day at 5s. per thousand.

**POTASH SALTS.**—*Bichromate* rather dull of sale at 3½d. per lb. *Chlorate* quiet, but steady, at 5½d. to 5¾d. *Yellow Prussiate* at 9½d. to 10d. per lb., according to brand. *Salt-petre* steady and not very plentiful. *Permanganate* has again declined in price, the quotation now being from 60s. to 65s. per cwt., according to size of crystals.

**PUREE.**—Twelve cases were all bought in, 7s. 6d. per lb. being named as the price for the best quality.

**QUASSIA.**—5l. is the price for good quality logs. 15 tons were offered to-day, and for this the limit is 5l. 10s. to 6l.

**QUICKSILVER** has been dull of sale, the importers still holding at 10s., but second-hand is offering at 9l. 17s. per bottle.

**QUILLAIA.**—Business is reported from Liverpool at 19l. to 20l. per ton.

**QUININE.**—A considerable amount of business has been done at a slight decline in values. *German* bulk on the spot, B. & S. and Brunswick, at from 12½d. down to 12d. per oz., at which figure it closes to-day; and for forward delivery some brands first and second-hand at from 13d. down to 12½d., delivery up till March next.

**RHUBARB.**—Of 93 cases offered to-day 63 cases sold at a slightly reduced price for *Canton*, of which the bulk consisted. Small to bold fair coat, three-quarter pinky grey fracture, flat, 1s. 3d. per lb.; and round, somewhat spongy, at 1s. 3d. per lb. also. Medium to very bold fair coat flat, good fracture, slightly wormy, 1s. 2d. per lb.; good small round three-quarter pinky fracture, 1s. 1d.; and small to medium wormy half dull fracture, flat, 11d. to 11½d. per lb. *Shensi*, round, partly small and irregular, partly unusually bold and heavy, bright coat four-fifths fine red fracture, 3s. 3d. per lb.; small to medium round, fair coat, nearly all good fracture, 1s. 6d. to 1s. 7d.; smaller ditto, 1s. 3d. to 1s. 4d.; small pale round root, three-quarter pinky, suitable for trimming, 1s. 4d. to 1s. 5d. per lb.; very wormy flat and round mixed sizes, 6½d. to 9d. per lb.

**SARSAPARILLA.**—Of 17 bales fair grey *Jamaica*, only a few packages wormy sold at 1s. 2d. per lb.; sound root being bought in at 1s. 5d. *Honduras* of good brands is selling at 1s. 6d. per lb., showing a steady price. A parcel of 13 bales from Havre, damaged, partly good grey *Jamaica*, partly chumpy *Guayaquil*, sold at 11d. per lb. to-day. *Mexican* is firmly held in America at 5½d. per lb., c.i.f. terms.

**SENEGA.**—The new crop has now been gathered, and, according to New York advices, the stocks in the collecting districts are less than they have been for some years. The New York stock is also said to be small.

**SENNA.**—There has been an arrival this week of about 800 packages *Tinnevely*. At to-day's auctions 272 packages were offered, nearly the whole of which sold at full prices; bold to fine very bright green, at 6d. up to 8½d. per lb.; good green medium to pale, partly specky, 4½d. to 5d.; ordinary small yellow to fair greenish and yellow mixed, 2½d. to 3½d.; common small and specky, from 2½d. down to 1½d. per lb. Three bales *Alexandria* pods of new import were held for 10½d. per lb.

**SHELLAC.**—The market last week closed with a firm tone with considerable sales at 97s. for November; and 98s. for December TN orange. At Tuesday's drysaltery auctions 476 cases were offered, of which only 80 cases *Button lac* sold at an advance of 2s. to 3s.; unworked fine firsts, 98s.; blocky firsts, 93s.; blocky to fair seconds, 91s. to 94s.; fair thirds to common, 90s. down to 75s. per cwt. Since then a good deal of business has been transacted at rising prices in the ring, to-day's quotations being:—

		Nov.	Dec.	Jan.	Feb.	Mar.	April
Orange TN, sellers	--	101/6	101/	98/	92 6	91/	90
" buyers	--	79/	100/6	95/	89/	89/	89/

Garnet AC nominal.

After the ring 100s. 6d. to 101s. was paid for December; and 96s. for January. These prices show 3s. to 4s. advance since last Thursday.

**ST. IGNATIUS BEANS.**—Four bags from Hong Kong were sold to-day at 5½d. per lb.

**SULPHUR** finds a steady outlet at 85s. per ton for *recovered* 115s. for *rolls*, and 165s. for *flowers*. The demand for the first-named grade is particularly strong.

**TEA.**—The China market is kept well supplied, and now that dealers have a better assortment of teas they find the life has not quite gone out of the China trade. Kaisows selling from 6d. to 8d. are going freely into consumption, and are better value than any class of tea selling at that range of prices. Monings from 8d. to 10d. are rather easier. Assams are selling at last week's quotations. Broken Pekoes with some style under 1s. are taken very readily. Ceylons, on the other hand, are dull, and the improved value of Assams appears to have taken the attention of buyers from Ceylons.

**TONQUIN BEANS.**—Fourteen packages were offered to-day, good frosted *Angostura* are held for 6s. 9d.; 8 cases *Para* sold at 3s. 8d. to 3s. 9d. per lb. for poor rather red mixed, and 3s. 5d. to 3s. 6d. for very foxy. The New York syndicate are quoting 6s. 9d. for *Angostura* beans in large quantities. It is reported that the second-hand is almost cleared out, and is scarcely any lower now than the combination; the latter, therefore, may expect their turn to come shortly.

#### CHEMICALS IN THE NORTH OF ENGLAND.

THE chemical market on the whole has been quiet but firm during the week. Prices are gradually approaching the rates fixed by the union, and by the time this report appears in print, manufacturers all round will be quoting on the basis fixed by the committee of that organisation.

**BICARBONATE OF SODA.**—Scarce and firm at 7l. per ton for 1-cwt. kegs f.o.b. Liverpool, with makers fully sold for prompt.

**BLEACHING-POWDER.**—There has been more doing for forward on American account, and sales of hardwood have been made at 6l. 5s. per ton for November-December delivery, and 6l. 10s. per ton over next year f.o.b. Liverpool. For home consumption business has been done at 6l. per ton on rails for 1891. In October delivery price quoted is 5l. 10s. per ton in softwood casks on rails, or 6l. to 6l. 5s. per ton in hardwood f.o.b. Liverpool. Tyne market very steady, with little offering for this month, market closing at 5l. 10s. to 5l. 12s. 6d. per ton. For November-December, price is 6l. per ton, and for next year, 6l. 5s. per ton, softwood casks, f.o.b. Tyne.



**CAUSTIC SODA.**—Lower rates have been accepted by makers for October delivery, in view of transfer of works on November 1, and sales have been made for this month's delivery, at 10*l.* 5*s.* per ton for 60-per-cent., and 11*l.* 5*s.* for 70-per-cent., f.o.b. Liverpool; 74-per-cent. is very scarce, at 12*l.* 7*s.* 6*d.* to 12*l.* 10*s.* For next month, 60-per-cent. is quoted 10*l.* 10*s.* and 70-per-cent. 11*l.* 10*s.*, and December 10*l.* 5*s.* and 11*l.* 5*s.* respectively. Minimum prices at present for 60-per-cent. and 70-per-cent. for next year's delivery is 10*l.* and 11*l.* f.o.b. Liverpool; 77-per-cent. white for prompt is 12*l.* 5*s.*; November and December, 12*l.* 10*s.*, f.o.b. Tyne, net cash. Ground, and packed in barrels, 3*l.* per ton extra.

**CHLORATE OF POTASH.**—Quiet, but steady, at prices ranging from 5½*d.* to 5¾*d.* per lb. for prompt, at usual ports of shipment. For November and December delivery, price asked is 5½*d.* per lb., and for next year 6*d.* per lb.: usual terms.

**CREAM CAUSTIC.**—Firm, but quiet, at 9*l.* 15*s.* per ton on rails, and 10*l.* per ton f.o.b. Liverpool, with nothing doing for forward.

**HYPOSULPHITE OF SODA.**—Very firm and scarce, but without any alteration in price. Quotations are 5*l.* 10*s.* per ton in casks, and 6*l.* per ton in kegs, f.o.b. Tyne; and 6*l.* 5*s.* and 6*l.* 15*s.* per ton on rails Liverpool and Manchester.

**SODA ASH.**—In good demand, and very scarce at 1¾*d.* for caustic, and 1¾*d.* to 1½*d.* for carbonated, f.o.b. Liverpool. Tyne market for this month's delivery is 1¾*d.* less 7½ per cent., and for forward from November to end of 1891 lowest price is now 1¾*d.* per degree less 3½ per cent. discount, f.o.b. Tyne or Liverpool.

**SODA CRYSTALS.**—Very firm at 3*l.* to 3*l.* 2*s.* 6*d.* on rails, and 3*l.* 5*s.* to 3*l.* 7*s.* 6*d.* in 3-ewt. barrels f.o.b. Liverpool for prompt and November-December delivery, and 3*l.* 5*s.* per ton over next year. Newcastle market firmer, and Union prices quoted from now to end of year—viz., 56*s.* 6*d.* per ton, gross weight.

**SULPHATE OF COPPER.**—Little doing, at 18*l.* 7*s.* 6*d.* to 18*l.* 10*s.* per ton, less 5 per cent. discount f.o.b. Liverpool, prompt delivery. For early '91 price quoted is 19*l.* 10*s.*

**SULPHATE OF SODA.**—Quiet market, and little business to report. For prompt and to end of year makers quote 40*s.* per ton in bulk, on rails Widnes and St. Helen's. For next year's delivery, 42*s.* 6*d.* to 45*s.* per ton. Tyne quotations are 42*s.* 6*d.* per ton in bulk, and 52*s.* 6*d.* per ton, ground and packed in casks for export, for November-December and '91 delivery.

## THE GERMAN MARKETS.

HAMBURG, October 23.

OUR trade in all branches during the week just passed has been of an exceedingly dragging character, and in consequence of the great scarcity of money nearly all articles have been purchasable at rather easier rates. Speculation has been confined within the very narrowest limits, an exception being made, however, in the case of Peruvian balsam, for which in the course of this week an exceedingly strong speculative demand developed, prices being thereby again advanced. Nothing is now obtainable for delivery, and our stocks are becoming very small, as the demand not only exists here but buyers throughout the country are also beginning to wake up. It is not at all unlikely that elevated rates will rule for this article throughout the winter.

**CAMPHOR (REFINED).**—Dull, but keeping its price up very well at 392½*m.*

**COCA LEAVES.**—All varieties appear to be getting scarce; fine Bolivian leaves already find buyers at 280*m.*

**COCAINE.**—Our stocks have been cleared to a considerable extent, and nothing is to be had here under 500*m.*

**CONDURANGO.**—All parcels offering for delivery have found a good demand, and a much better tendency exists for the article.

**QUILLAIA BARK.**—Not available under 40*m.*

**WAX (BEES').**—Very scarce, all varieties bringing high prices.

**WAX (JAPAN).**—Rather easier again at 91*m.* for fine quality; white scarce.

**WAX (CARNAUBA).**—More demand is experienced, fine yellow, 155*m.*; for grey 120*m.* is required.

## THE DUTCH MARKET.

AMSTERDAM, October 29.

ALL the analyses for the cinchona bark sales to be held in Amsterdam on November 6 have been published now, and the manufacturing bark contains about 13½ tons sulphate of quinine, or 3.92 per cent. on the average. About 27 tons contain 1.2 per cent.; 59, 2.3; 80, 3.4; 123, 4.5; 31, 5.6; 15, 6.7; 7, 7.8; 1, 8.9 sulphate of quinine.

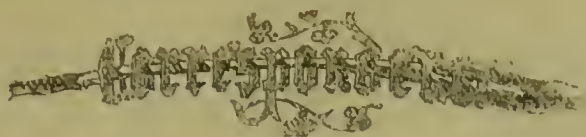
## THREATENED SHELLAC CORNER.

THERE has been a good deal of wire-pulling in the shellac ring lately, and the formation of a syndicate of "bulls," with the object of securing control of the delivery market, has been freely canvassed in the sale-rooms during the last few days. As a matter of fact, there are practically two independent shellac markets at present, that on the spot, and that for delivery, the latter being little better than a more or less scientifically-planned gamble. One firm of brokers (acting, it is said, on behalf of sundry houses in the coffee trade) have lately been "bearing" the shellac delivery market, and about a fortnight ago they created almost a panic by their sales of orange lac for November and December delivery at a decline of several shillings. But since then the market has regained strength, and the opinion now prevails that the turn of the "bulls" has come. A few days ago five of the principal "bull" brokers met at the office of one of their number, who is said to be very considerably interested in shellac. They compared notes, and found that between them they held contracts from the "bears" for shellac to be delivered in November and December so large that the whole of the London stock, even if it were available, would not suffice to supply the requirements. The five brokers thereupon agreed to form a pool with the object of cornering the "bears" when their time for delivering the lac contracted for should arrive, and they have entered into an agreement, the breach of which will involve considerable penalties, to secure unity of action. What the result of this combination will be the next few weeks must show. Meanwhile a small slip of doggerel is being circulated, reciting the situation from a "bear" point of view, and describing the five brokers in a more or less veiled manner. The effusion winds up with the following moral, which we reproduce, not so much on account of its literary merit, as because it pins the poetaster down to a prophecy, the fulfilment or otherwise of which must take place before the end of the year, and will, therefore, afford an early opportunity to put the prophetic power of the Seer to the test.

"Five little Brokers met behind a door;  
One wriggled out, and then there were four.  
Four little Brokers nearly up a tree;  
One kicked the bucket, and then there were three.  
Three little Brokers didn't know what to do;  
One sold his holdings, and then there were two.  
Two little Brokers failed to see the fun;  
One cut the other out, and then there was one.  
One little Broker his clients had to dun;  
Failed to get margins, and then there were none."

**NOT TO BE SNEEZED AT.**—There is a cayenne-pepper tree in Orlando, Florida, says the *Florida Facts*, 10 feet in height, and laden with peppers in all stages of maturity.





### Memoranda for Correspondents.

*Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.*

*Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.*

*If you send us newspapers, please mark what you wish us to read.*

*Ask us anything of pharmaceutical interest: we shall do our best to reply.*

*Before writing for formulae consult the last volume, if you have it.*

*Letters, queries, &c., will be attended to in the order received.*

### Company Pharmacy.

SIR.—With regard to the proposed new Pharmacy Bill, my opinion is that it should be opposed by everyone who wishes well to the trade. All the force and influence that can be brought against it should be used unsparingly to throw out the Bill.

We have only to show the "House" that the Council of the Pharmaceutical Society have hitherto failed to carry out the Pharmacy Acts already entrusted to their care and execution; also, that the Council are ignorant of the meanings of the clauses of the said Acts. But, what we are prepared to support is, a full, complete, and comprehensive measure, repealing, if you like, all previous ones—one that the Council can understand and act upon.

No new Pharmacy Bill should be brought forward unless it settles the question of company pharmacy. To allow the present proposed Pharmacy Bill to go unopposed is to acquiesce, at once and for all time, in company dispensing, which means ruin to the business of chemists and druggists.

Yours, &c.,

68 Fleet Street, E.C.,  
October 29.

G. P. POND.

SIR.—How do you propose to deal with an imaginary case like the following:—Mr. Brown, a chemist and druggist, qualified, not having much capital, is assisted by his cousins and his aunt, conditionally upon their sharing the profits of the business. Out comes the signboard: "Brown's family drug-store. Drugs, patent medicines, and sundries, with dispensing by qualified assistant, at bed-rock prices. Terms strictly cash." Here you have a company in reality under the guise of a single trader—Brown—and what can Jones & Robinson, pharmaceutical chemists, medallists, prizemen, &c., in the same street, do to alter the arrangement? Mr. and Mrs. Bull will look more to Brown's *prices* than to Jones & Robinson's *prizes*, and purchase their physic accordingly. Messrs. Jones & Robinson may well ask each other whether it was worth going through so much to gain so little.

Yours truly,

Worthing.

J. BURT.

[Brown's cousins and aunts can lend him as much money as they like. Under Bovill's Act they can do so, taking their remuneration in the form of a share of the profits without becoming partners. Brown can charge what prices he chooses. What more can Brown reasonably want? What the law at present gives him, and what the Pharmaceutical Society propose to perpetuate to him, is the right to make his cousins and his aunts "chemists and druggists." This is what we object to.—ED. C. & D.]

SIR,—I think your leaders on trade interests admirable, and, although generally unexpressed, you doubtless have the thanks of thousands.

HARD LINES. (165/29.)

### Too Much Study.

SIR,—Your report of the meeting of the Newcastle Chemists' Assistants' Association does not accurately convey the advice which I gave on that occasion. If for the words "too much attention to study" you were to substitute "too much attention to mere book-learning, and preparation for examination," I could have accepted the paragraph as fairly representing my position.

The fact is, I very rarely find young men devoting too much time to study, though I have often found that time was being devoted to books which ought to have been devoted to work, and I very constantly find that the reading of lessons, the passing of examinations, and the earning of prizes, leaves the so-called student incompetent to make useful application of the knowledge he has acquired.

I think I have known a score of times examined men selling 3j. of an article for a penny which they knew to be 8d. per oz. avoirdupois, and unable readily to see the inconsistency of so doing. This is only one of many illustrations of the want of readiness to make practical use of the knowledge of which they have a theoretical possession.

I told my audience that their passing the Minor examination was only taking out the licence to commence the battle of life, and that their success in the battle would depend but little upon their examination, and very much upon their having acquired thorough business habits, and the power of making practical application of the knowledge the theoretical possession of which their examination had indicated.

BARNARD S. PROCTOR.

Grey Street, Newcastle, October, 1890.

### Look to Your Acids!

SIR,—“West Country Retailer” has seriously miscalculated the strength of diluted hydrochloric acid.

According to the Pharmacopœia, “345 grains (six fluid drachms) requires for neutralisation 1,000-grain measures of the volumetric solution of soda.”

345 grains = 22.356 grammes, and as 34.5 grammes requires 100 c.c. of the volumetric solution, six fluid drachms should require 64.8 c.c.

One specimen was therefore above, not “fully one-third below,” strength.

Yours obediently,

Spalding, October 27.

E. WIGHTMAN BELL, F.C.S.

SIR,—“West Country Retailer” evidently got very much mixed with regard to his measures when testing his samples of acid hydrochlor. dil., which he measures with the British measure, and then uses the metric measure for his test solution.

F. 3vj. corresponds to 345 grains by weight, and this = 22.356 grammes. Now, as 34.5 grammes by weight requires for neutralisation 100 c.c. of the volumetric solution of soda,

$$22.356 \text{ grammes requires } \frac{100 \times 22.356}{34.5} = 64.8 \text{ c.c.}$$

Faithfully yours,

Dawlish, October 25.

GEO. JNO. CUTCLIFFE.

### Pepsin.

SIR,—I am much interested in your article on “What is Pepsin?” It has set me wondering if the time will ever come when we shall be able to lay hold of this class of ferments, bottle them up, dissect them, put them in combustion tubes, call them by scientific names, and give them formulae half a yard long. No doubt some genius will one day arise to do all this for us, but till he appears we shall have to grope away in the Stygian darkness of empiricism, which not even Dr. Eccles will be able to illumine. If Dr. Eccles is right, what a gullible set of numskulls we are, to be sure, and how absurdly have we allowed quackery to override us! But if Dr. Eccles is wrong, well, then we may not be such fools after all, and possibly we have not been deluding ourselves as to the results that have been and are daily being found in the medicinal use of pepsin, both in the dry and in the fluid conditions. From your report of his paper, Dr. Eccles is a capable investigator, and not one to be dismissed with a wave of the hand as unworthy of attention; and if it be the case that the very purest pepsin in the market contains only



2·7 per cent. of pure ferment, some advertisers will need to take a back seat, and if true of the "very purest," what about the "pure" and the "B.P."? For if these were done in the green tree what shall be done in the dry?"

This new phase of the pepsin question is one that will give conscientious pharmacists many anxious moments, for it is no light matter to be told by an authority that our methods have been based not only on misconceptions, but on positive fallacies. Dr. Eccles' strictures are applicable not only to dry pepsin, but also, and probably with more force, to fluid pepsins. He states that "diluted alcohol completely destroys" pepsin, and that dilute acid also has an injurious effect. If this is so, we fail to account for the extraordinary success which some peptic solutions have attained, for these (I presume all) contain both dilute alcohol and hydrochloric acid. Some years ago I was interested in this question, and examined at that time a popular solution, one that became the progenitor of a numerous family, and on referring to my notes I find the composition to have been something like this:—

	Oz.
Pepsin .. .. .	2
Glycerine .. .. .	3
Dilute hydrochloric acid .. .. .	4
Rectified spirit .. .. .	12
Distilled water to .. .. .	100

M.

Now, if Dr. Eccles is correct, this formula—and, for the matter of that, all formulæ for fluid pepsins, and pepsin wines, even glycerine of pepsin, as well as the elixirs and liquors so familiar to the eye that reads advertisements—these formulæ and preparations are all the reverse of scientific. We may assume that all these medicaments contain diluted alcohol, and the majority of them will contain acid, and, according to Dr. Eccles, all of them, in the course of time (how long is this?) [From 2 to 18 months, says Dr. Eccles.—Ed. C. & D.] will be deprived of the ferment. What, under these circumstances, are we to do? Some of us have long been of the opinion that certain conglomerations of incompatibilities were a standing reproach to scientific pharmacy, but we must also bid good-bye to those simpler solutions which we had placed in a very different category. No doubt we shall get everything unscientific eliminated from pharmacy some day; but it will be rather awkward to dismiss the old until we know where the new is to come from, and till Dr. Eccles or some other produces pepsin as it ought to be, we shall have to be content with pepsin as it is.

Yours, &c.

PHARMAKOS.

SIR,—The elaborate paper on pepsin read by Dr. Eccles before the American Pharmaceutical Association, and which you reviewed last week, contains many remarkable statements, some of which are not supported by experiment, and are calculated to do much harm if taken seriously. Some of these are mentioned in your leader, and need not be referred to further. The statement, however, that "coagulated albumen needs no pepsin to dissolve it, but will dissolve in 0·2 per cent. hydrochloric acid alone," is absolutely without foundation in fact. For some time, and after much experimenting, I have used the following method as the best for readily determining the comparative value of pepsins—500 grs. hard-boiled white of egg are rubbed up in a mortar with 20 min. acid hydrochloric, and 8 oz. of water gradually added; the mixture is transferred to a beaker, and kept at 98° to 130° F. for some hours, with constant stirring. Half a drachm of good fluid pepsin, or from  $\frac{1}{5}$  to several grains of dry pepsin, will, if added at the beginning of the process, effect solution in from one to four hours. A blank experiment, which I always have as a standard in comparative testing, never shows any appreciable diminution in the quantity of albumen which settles to the bottom of the beaker, however finely the albumen may be divided. This is a fact which cannot fail to force itself on the attention of all who are in the habit of testing pepsin. The statement that "dissolving albumen is a rough way of testing pepsin at the best" is traversed by the author's own table headed "Comparative pepsin tests," in which he shows that those pepsins which most quickly dissolved albumen soonest ceased to precipitate with nitric acid. As the former

method is the more readily applied, it is reasonable to suppose that for commercial purposes it will remain the standard test. Dr. Eccles's experiments have decidedly strengthened its position as a method for the commercial laboratory.

Sheffield.

Yours truly,

G. A. GRIERSON.

#### "Warrington Chloroform."

SIR,—Your article in the issue of September 27 under the above heading has excited some curiosity as to the ultimate source of the drug so named. Although the term "ketone" comprises a large number of compounds, I do not think I am wrong in assuming that in this case it means the best known and type of its class, acetic ketone, or acetone, obtained for the purpose by the destructive distillation of calcium acetate. It would, perhaps, be hypercritical to object to the description of the chloroform so obtained as a pharmaceutical novelty; but the sixth edition of Brande's "Chemistry," published in 1848, states, in the description of acetone, on page 1,732, that "distilled with chloride of lime it yields chloroform."

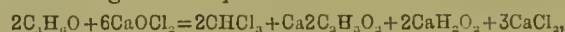
The abundance of wood from which the acetate can be obtained on many parts of the North American continent confers an initial advantage on the manufacturer under this process as compared with the user of alcohol. Nor does the process compare less favourably in economy of working than in cheapness of material.

The equation given below shows that acetone,  $C_3H_6O$ , yields chloroform in molecular proportions. There is an obvious error in the transcription of Dr. Sadtler's paper from the *American Journal of Pharmacy*, which appears in the *Pharmaceutical Journal*, vol. xx., page 86, where  $2C_3H_6O$  are represented as producing  $3CCl_3H$ .

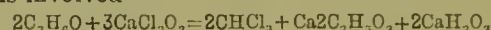
By the official process four molecules of alcohol theoretically produce two of chloroform; and the pint and a half of rectified spirit, containing 21 oz. of pure alcohol, requires 8 lb. 2 oz. of calcium hypochlorite,  $CaCl_2O_2$ , or, as ordered, 10 lb. of chloride of lime.

To produce 240 parts of chloroform, 184 parts alcohol or 116 parts of acetone are required; and, since the latter is practically anhydrous,  $13\frac{1}{4}$  oz. of it would take the place of the spirit, and 5 lb. 7 oz. of chlorinated lime replace the 10 lb. ordered, although in practice more than this appears to be employed.

The following is the equation:—



or, treating it as a reaction in which only calcium hypochlorite is involved—



Two molecules of acetone and three of calcium hypochlorite yield two of chloroform, one of calcium acetate, and two of calcium hydrate.

The production of calcium acetate by the oxidation of a part of the ketone employed shows the necessity for a frequent revision of our knowledge of organic chemistry, since Fownes, tenth edition, page 826, gives as the first distinguishing character of ketones as a class that they are not converted into the corresponding acids by oxidation. The greater purity of the "Warrington" chloroform appears to be due to the greater ease with which acetone, as compared with alcohol, can be purified by fractional distillation.

Yours very obediently,

Market Square, Dover,  
October 29.

J. F. BROWN.

#### Copper in Extract of Belladonna, and others.

SIR,—I have samples of extract procured in the ordinary way which have no doubt been prepared in imperfectly tinned presses and evaporating-pans, and are therefore strongly impregnated with copper.

I would caution chemists to be particularly careful in purchasing these impure preparations.

The method of proving copper is easy and simple. Dissolve a sample in equal parts of water by means of a little heat, stir with a bright and perfectly clean iron or steel spatula; a trace of copper will dull the surface, and a more or less thick precipitate of metallic copper will form in a few minutes

Yours, &c.,

E. L. ARMBRECHT.



## Qualified Assistants in Ireland.

SIR,—According to a report in a recent number of THE CHEMIST AND DRUGGIST, Mr. Wells, the Vice-President of the Pharmaceutical Society of Ireland, with the approval of other members of the Council, stated that it was not compulsory for assistants to pharmaceutical chemists to be qualified. I think this statement, although, no doubt, strictly correct, is calculated, in many instances, to lead to a false impression, without further explanation.

Section 17 of the recent Irish Pharmacy Act provides that "every person . . . lawfully keeping open shop for . . . dispensing, &c., &c., shall personally manage or conduct such shop, &c., or shall employ . . . as assistant . . . a duly-qualified pharmaceutical chemist," &c.

If the provisions of this section are not to be allowed to become inactive, it appears—especially in view of the recent decision as to the "seller" in the Wheeldon case—unless the proprietor is willing to tie himself to the shop from January 1 to December 31, to be practically imperative for his assistant, or assistants, to be qualified. What do my fellow-licentiates, especially those not in business on their own account, think of the matter? Yours,

10A High Street, J. J. MACAULAY.  
Holywood, Co. Down.

## No Irish Need Apply.

SIR,—It appears from the regulations relative to the appointment of dispensers in her Majesty's naval hospitals at home and abroad that candidates must possess either the Minor or the Major qualification of the Pharmaceutical Society of Great Britain. Why should the Irish qualification be disregarded? Surely the regulation should be amended, especially as such a large number of surgeons from the Emerald Isle are in the navy. The public service competition should be open to the colonies also.

Yours, &c.,

Devonport, October 23. DEVONIENSIS. (164/34)

[This is a point of some importance, which the Irish Pharmaceutical Council should look to.—ED. C. & D.]

## The Glasgow Salicylic Acid Prosecution.

SIR,—May I be allowed to state, for the benefit of those of your readers who are not cognisant of the real state of affairs, that the late Mr. John Williams (of the firm of Hopkin & Williams) was the pioneer of salicylic acid in this country?

He first made the natural acid in this country, and he it was who introduced it to the medical profession. In the *Pharmaceutical Journal* for April 6, 1878, page 785, he published a most valuable paper, in which he gave full details as to how to purify the artificial acid so as to make what is now called "physiologically pure" acid, and he supplied it commercially. He did not patent his process: like our friends at Glasgow, he was "above that sort of thing," even though he had the slight advantage of being the originator and actual discoverer of the process.

In conclusion, let me add that pure artificial salicylic acid, prepared according to his directions, is still obtainable by those who may desire it.

16 Cross Street, I am, Sir, yours faithfully,  
Hatton Garden, E.C. JOHN HODGKIN.  
October 27.

## Making Ginger-beer.

SIR,—In your most interesting notes on "The Brewers' Exhibition," published in your issue of October 25, there is a slight inaccuracy we should like to point out to you. Speaking of "Stone Ginger-beer," you state: "There is a disposition to make the drink without fermentation, which is the safest thing for those who do not want to get into trouble with the Excise." This is not the case. Fermentation is absolutely necessary to make high-class stone ginger-beer, although there are many essence-makers who, for obvious reasons, contend that equally good stone ginger-beer

can be made by aëration. The great difficulty that ginger-beer brewers have to contend with is false fermentation. To obviate this, the advantage of brewing from an essence, instead of ginger-root, will be apparent to all. Our soluble essence of green ginger contains no insoluble resins, or starchy matter; hence ginger-beer brewed from the essence is free from heavy, muddy deposit, and will keep for a much longer space of time than when root is used. We have in our possession now ginger-beer brewed in February last from the essence, which is perfectly sound and good still. With regard to the Excise, this difficulty is easily adjusted. It is a simple matter to calculate exactly the percentage of proof spirit resulting from a brew of known proportions. In our opinion, ginger-beer brewing only needs the application of some sound scientific principles to be placed in as secure a commercial position as beer brewing.

Standard Works, We are, yours faithfully,  
95A Southwark Street, S.E., STEVENSON & HOWELL.  
October 28.

## DISPENSING NOTES.

*The opinions of practical readers are invited on subjects discussed under this heading.*

166/43. *S. D.*—"Sal therm. earol. factit." is artificial Carlsbad salts. Send 2 oz. The mixture is:—

Tinct. strychniæ .. .. . 5·0

[Dispense tinct. nucis vom. 75 minims.]

Tinct. amaræ .. .. . 20·0

[Tinct. gent. co. is the nearest British equivalent to this. Send 5 fluid drachms.]

The directions are to take 20 drops three times daily.

## Giving Copies of Prescriptions.

SIR,—Some time ago I purchased a business in a small country town, and felt naturally anxious to please all my customers and gain their confidence and respect. One lady whom the books proved to be one of the best patrons had a lot of attention, and she frequently wished for copies of prescriptions; amongst others she was supplied with a copy for dinner-pills, entered in the books by a predecessor some fourteen years previously, and priced by him 1s. per dozen, each pill containing 2 grains of pure pepsin. I supplied one dozen at this price, and, much to my surprise and disgust, she appeared a short time afterwards to say the stores (where my prescription had gone) charged her 8s. for two boxes of a dozen each, and I charged her 1s. for one dozen. This was all the thanks I received for obliging with a gratuitous copy of the prescription.

I should like to know the opinion of your readers as to the best plan to adopt in giving copies after experience like this.

Yours truly,

HARD LINES. (165/29.)

## LEGAL QUERIES.

157/60. *Scotia.*—Your "deed" is not definite in several respects, and you do not state what question is to be submitted to the court. But even if you told us we could not predict how a judge would construe the document. Trust yourself to a competent solicitor.

166/64. *Leo*—The title "chiroprapist" is not protected. We do not know of any society of chiroprapists.

165/68. *Esser.*—The 1868 Bill was not opposed as a whole, though some of its clauses were. It was a compromise of other Bills which had been opposed. We cannot tell who will oppose the new Bill if introduced.



## MISCELLANEOUS INQUIRIES.

Correspondents who ask replies to be inserted "this week" or "next week" are reminded that we do not guarantee replies, and that their insertion depends upon the space at our disposal for such matters. It is generally impossible for us to find room for queries the same week they are received.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

165/53. *Peafo.*—(1) *Ruspini's Styptic.*—Tannic acid, 5 parts; brandy, 10 parts; dissolve, and add rosewater, 120 parts. (2) *Children's Cough-mixture.*—See the DIARY.

165/72. *Country Chemist.*—The little puff is hardly worthy of correspondence. If we published your attack we should very likely have to give your friend's reply, and the dispute could not be generally edifying.

166/59. *Polish.*—We have not the formula. Your best course would be to communicate with the makers of the article. Can you advance any just reason for our trying to damage their business at the same time that we endeavour to improve it by inserting their advertisements?

166/53. *Guaiacol.*—You will find information regarding guaiacol in the "Art of Dispensing." The remarks which we recently published regarding the use of creosote in phthisis also apply to guaiacol. They are practically equal in efficacy. There is no chemical reason why guaiacol should not be given at the same time as iodoform.

167/22. *Tungstate.*—**Hand-grenade Solution** is made from various alkaline chlorides and carbonates. A formula was given in our issue of March 8, p. 345.

166/45. *G. R. H.*—The **Storm-glass Solution** made by dissolving 2 grains of salicylic acid in a pint of distilled water, and adding 5 minims of tincture of steel, fades, as might be expected, and probably because the iron is reduced to the ferrous state. You say that other chemists have compounded a solution which did not fade; perhaps they used liquor ferri perchlor. Spirit reduces iron from the ferric to the ferrous state.

167/3. *Excelsior.*—All powders containing sugar are apt to cake, and the addition of milk-sugar appears to augment this property. We cannot explain why. Your powder is a risky one. Potassium nitrate and calomel when freshly mixed may not do any harm, but when other substances are present which may become acid there is some danger of decomposition taking place. Modifying your receipt for **Teething and Fever Powders**, we should give the following to children of six months:—

Hydrarg. subchlor.	..	..	..	gr. ½
Pulv. antimonialis	..	..	..	gr. ¾
Pulv. sacch. lactis ad	..	..	..	gr. 1

Misce.

Double this for older children up to two years. Antimonial powder and calomel in much larger doses are apt to induce depressing sickness in children suffering from some simple affections.

163/53. *Benzoin.*—The best book on coal-tar distillation is Lunge's, but it is expensive.

166/60. *J. W. D. H.*—**Colours for Carboys.**—*Green.*—See issue of February 8, page 206. *Red.*—A weak solution of iodine. See also THE CHEMIST AND DRUGGIST, August 24 and 31, 1889.

166/31. *R. B.*—**Tinct. Menthol Æthereal.**—One drachm of menthol to 1 oz. is what Sir J. Sawyer prescribes.

166/32. *T. P.*—The red colouring used for sausages is made from one of the coal-tar colours. You can obtain it from any of the houses who advertise harmless colourings with us.

166/33. *Precipitate.*—You can get the Educational Number from the office.

164/44. *W. E. S.*—The mixture is bound to separate. The best way of working is to mix the oils of thyme and turpentine with the Goulard's extract, and keep as long together as possible (shaking frequently); then add the rest of the ingredients in their order, the vitrol last. There are many more ways you could follow, and by each one you would get a different result—chemically.

164/33. *T. W. R.*—We gave particulars of prison dispenserships in our Educational Number (September 22), and since then vacancies have been advertised with us.

166/10. *E. Marston.*—**Chilblain Liniment.**—A few formulæ were given in the last DIARY.

164/72. *J. F. B.*—**Syrupus Zinci Phosphatis.**—Zinc phosphate, 192 grains; water, ʒxi.; rub together. Add syrupy phosphoric acid, ʒv.; filter, and make up to 12 oz. with syrup.

## Information Supplied.

**The Dividing-scale.**—I find the better way of mounting Warwick Brothers' dividing-scale, noticed by you some weeks back, is to lay it face upwards, paste the edges about ¼ inch all round, lay over it the glass from a 1d. violet-powder box, press it gently, and cover the back with brown paper, the edges of which are turned over for about ¼ inch, and pasted over the edges of the glass; this keeps it much flatter than mounting on a card, and prevents the divider becoming soiled.

E. S. V. (166/6.)

**Thread-worm Syrup** for children, made from the formula given in the DIARY for 1889, separated. Working on a suggestion of Mr. Martindale (THE CHEMIST AND DRUGGIST, June, 1885) for the preparation of tr. podoph. I have obtained a satisfactory preparation, which after some weeks shows no sign of separation. The formula is "Santonin, 60 grs.; podophyllin, 8 grs.; ol. m. pip. gtt. v.; sp. amm. aromat., ʒss.; sp. tenuior., ʒiv. Digest one day, and add thin syrup to 10 oz." I dissolved the santonin and podophyllin in the sp. amm. aromat. in a glass mortar, transferred to the bottle, added the ol. m. pip. dissolved in 2½ oz. S.V.R., let it stand a day, then added 1½ oz. aq. (to make the pf. sp.), and thin syrup (1 B.P. syrup to 1 aq.) to make 10 oz.

E. S. V.

## Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

166/6. *W.M.*—French huile de ricin bottles. Where obtainable in London?

165/6. Formula for Professor Grainger Stewart's "mist. agrimon. comp"?

166/12. What is white fuller's earth, and how can it be made?



# THE MODEL NORDLAND FISHING BOAT

Those who wish to make a display of the Oil on their counters or in their windows are recommended to obtain one of these unique and beautiful models, which have in so many cases been found useful in increasing the sale of the Oil.

These Models, made specially for us in Norway, are very picturesque, well built, and behave admirably in water. Each boat possesses oars, in addition to its sail, and is complete in every respect. It is also fitted with a cabin on deck, as used by the fishermen in travelling from their homes to the fishing ground. They measure 23 inches from stem to stern, and 32 inches to top of mast.

The Boats are intended for the interior of shops and windows as an attraction and advertisement, and are only supplied to purchasers of the "A 1" Oil; the price fixed is very moderate—namely 10/- each.

For the convenience of Chemists, and to secure the "A 1" COD LIVER OIL being placed in the hands of the Public perfectly sweet, we have packed it in 8-oz. and 16-oz. green flint oval and flat bottles, at the LOWEST POSSIBLE PRICE.

The bottles are sent out either without labels of any kind, or with the blue trade mark labels over the cork, and are either plain or capsuled. The corks are of best quality, and the bottles are packed in boxes with divisions specially made for the purpose, which are charged, but full prices are allowed when returned in good condition. It will be obvious that by bottling from the original casks, which have not been opened since they left the factory in Norway, the Oil in these small bottles must be in the most perfect condition.



## PRICES FOR THE HOME TRADE ONLY.

In Dispensing Bottles—containing 8 oz. fluid	By 6-doz. case.	12-doz. case.	24-doz. case.
	- 6/3	6/	5/9 doz. to a/c.
" 16 oz. "	By 3-doz. case.	6-doz. case.	12-doz. case.
	- 11/6	11/3	11/

CARRIAGE FREE.

*N.B.—If less than these quantities are ordered, carriage must be paid by the Customer, unless the order is made up to the value of £5 with drugs.*

**SOUTHALL BROS. & BARCLAY, BIRMINGHAM.**

## The BEST and CHEAPEST BEVERAGE

IN EXISTENCE IS

# VAN HOUTEN'S COCOA

**RICH YET DIGESTIBLE**

**STIMULATING YET SUSTAINING**

**SAVING WHAT OTHER PROCESSES WASTE**

DEVELOPING THE

**DELICIOUS FLAVOUR & AROMA**

AND FORMING A

# DRINK FOR A PRINCE

**AT LESS THAN A FARTHING A CUP.**



CRESCENT



BRAND.

# BICARBONATE OF SODA,

REFINED AND RECRYSTALLIZED.

PURE AND CHEAP.

## ANALYSIS.

Bicarbonate of Soda	...	...	...	...	97'20
Mono Carbonate of Soda	...	...	...	...	1'90
Sulphate of Soda	...	...	...	...	trace
Chloride of Sodium	...	...	...	...	'035
Moisture	...	...	...	...	'82
Insoluble	...	...	...	...	nil

# PURE ALKALI,

GUARANTEED 58 DEGREES,

EQUAL TO 98 PER CENT. OF CARBONATE OF SODA.

Most economical form of Soda for the use of Printers,  
Bleachers, Dyers; Glass, Paper, and Soap Makers.

# SODA CRYSTALS

OF THE FINEST QUALITY.

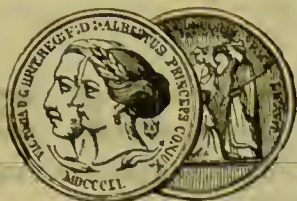
# BRUNNER, MOND & CO., LIM.

*Manufacturers of Soda by the Ammonia Process  
(Solvay's & Mond's Patents),*

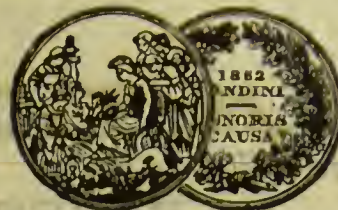
NORTHWICH, CHESHIRE.



Branch House: HOPKIN & WILLIAMS, 16 CROSS ST., HATTON GARDEN, LONDON, E.C.



Established  
1798



# Howards & Sons

## QUININE, CINCHONA ALKALOIDS,

Acetates of Soda & Potash.  
Acids, pure.  
Æthers, pure & methylated.  
Antimony preparations.  
Benzoic Acid & Benzoates.  
Bicarbonate of Potash.  
Bicarbonate of Soda (Howards').  
Bismuth preparations.  
Borax & Boracic Acid.  
Bromides of the Alkalies.  
Caffeine.  
Caffeine Citrate, P.B.  
Camphor Bells, Blocks, & Flowers.  
Citrate of Iron & Quinine, P.B.

Citric Acid & Citrates.  
Cocaine and its Salts.  
Corrosive Sublimate.  
Ext. Cinch. Liq. P.B., & H. & S.  
Ext. Cocæ Liq. P.B.  
Iodides of the Alkalies.  
Iodoform.  
Liq. Bismuthi et Am. Citratis.  
Magnesia.  
Mercurials, Calomel, &c., &c.  
Rochelle Salt & Pulv. Seidlitz.  
Spirit preparations.  
Terebene.  
Urethane. &c., &c.

## AND OTHER PHARMACEUTICAL CHEMICALS.

# Stratford, Essex.



*Detailed Price Lists on application.*



# SALICYLIC ACID AND SALICYLATES

[PHYSIOLOGICALLY PURE]

MANUFACTURED UNDER KOLBE'S PROCESS BY

[PHYSIOLOGICALLY PURE]

J. HAUFF, FEUERBACH - STUTTGART.

To be obtained from the Sole Agents.

N.B.—Stock kept in London.

[1]

**FUERST BROS.,** 17 PHILPOT LANE, LONDON, E.C.  
Telegrams—"FUERST LONDON." Telephone No. 1050.

## PURE CARBONATE OF LITHIA.

and all other Lithia Salts.

### MERCURIALS

Calomel, Corrosive Sublimate, Oxides, &amp;c.

### IODIFORM

Chloral, Terpene, Osmic Acid, Tannin, Tartar Emetic  
LIQUID CHLORIDE OF METHYL, for the treatment  
of Rheumatism, Neuralgia, &c.

GRAND PRIX, PARIS EXHIBITION, 1889.

Wholesale from **FUERST BROS.,** 17 Philpot Lane, London, E.C.Sole Agents for **BILLAULT,** Rue Sorbonne, PARIS.  
N.B.—Stock of the above kept in London.

Telephone No. 1050.

## FREDK. BOEHM,

BILLITER SQUARE BUILDINGS,  
LONDON,

Manufacturers' Agent &amp; Importer of the following

## CHEMICALS

Acetate of Lead. Permanganate of Potash.

Muriate of Ammonia.

Glycerine. Alcohol. Ethers. Chloroform. Acetanilide.

Boracic, Lactic, Tannic, Tartaric Acids.

Hypo-Soda. Oxalate of Potash. Hydroquinone. [4]

PRICE LIST ON APPLICATION.

## LOFTHOUSE & SALTMER, MANUFACTURING CHEMISTS, WHOLESALE AND EXPORT DRUG MERCHANTS, HULL,

Manufacturers of all Pharmaceutical Preparations on the best and most improved principles. Quotations on Application

### DEALERS IN PURE CHEMICALS

For Medicinal, Photographic, and Commercial purposes.

Importers of Cod Liver, Castor, and Olive Oils; Extra Super Essence of Lemon and Bergamot;  
Otto de Rose, and all Essential Oils; Valentia Saffron; Vanillas; Fruit Essences; Carmine;  
Aniline Dyes; Bees' Wax, &c., &c.

Special Agents for Sicilian Sublimed Sulphur in 2-cwt. bags, and Rolled Sulphur in 3-cwt. casks. Most Favourable  
Quotations can be given on application.

**WM. RADAM'S MICROBE KILLER.**

**ALL DISEASES.**

**CURES**

**ALL DISEASES.**

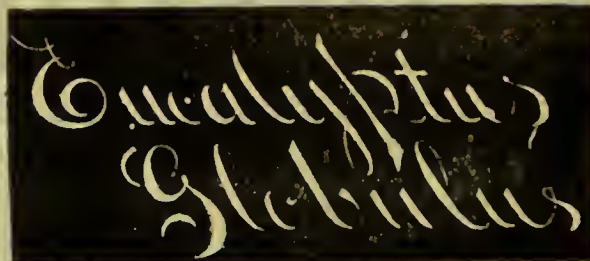
**Refreshing and Invigorating.**

**Especially useful in hot and malarial climates.**

**WHOLESALE WAREHOUSE**

**11 OXFORD STREET, LONDON, W.**

**WM. RADAM'S MICROBE KILLER.**



We distil pure oil of Eucalyptus GLOBULUS (which contains 88 per cent. of Eucalyptol, far in excess of any other variety) as a by-product in the manufacture of our Eucalyptus Boiler Fluid, and are therefore, enabled to place it in quantities at a much lower rate than has heretofore been asked for it.

**DOWNIE B. I. P. CO.**

4 REDCROSS STREET, LIVERPOOL; and  
204 MARKET ST., SAN FRANCISCO.



# R. W. GREEFF & CO.

## AGENTS FOR

# RIEDEL'S PHARMACEUTICAL SPECIALITIES

### SULFONAL

(RIEDEL).

This Preparation has the great advantage over other brands of being absolutely pure, melting at 258° F. Further, it is notably more bulky than other makes, and is therefore more easily and quickly dissolved and absorbed than compact and hard crystals.

### PHENACETIN

(RIEDEL).

Has a melting point of 275° F., which is the most important proof of its purity; there being several impure preparations in commerce.

### THIOL

(RIEDEL).

A substitute for Ichthyol, is COMPLETELY INODOROUS, readily Soluble in Water, and may be mixed with Ointment in any proportion.

## DR. HENRY BYK'S PURE CHEMICALS.

### ACID. BENZOIC. E TOLUOLO.

Almost odourless.

### ACID. BENZOIC. E RESINA.

Guaranteed to be sublimed from and retaining the fragrance of Gm. Benjamin.

### ACID. GALLIC. CRYST. CHEM. PURE

Perfectly white needles.

### ACID. PYROGALLIC BISUBLIMED.

Professor Dr. Vogel says:—" . . . light snowy white and carefully prepared article—DISSOLVING COMPLETELY and quickly in water or alcohol."

Professor Dr. J. M. Eder says:—"Dr. Byk's Pyrogalllic Acid is exceedingly light and bulky . . . as good an Acid as can be produced."

This is the lightest, and consequently purest Pyro in the trade.

### ACID. TANNIC.

Purest quality, powdered and granulated. Dissolves colourless in water, alcohol, and ether, free from resinous and colouring matter. For medicine and finest work in art.

### ACID. TANNIC LEVISSIMA PUREST

Dissolves colourless in water, alcohol, and ether, free from resinous and colouring matter. Used for similar purposes as the chemically pure powder.

### AMMONIUM BROMIDE.

### CHLORALHYDRATE.

### COFFEINE, PUREST, AND ALL COMPOUNDS.

### FERR. LACTIC. POWDER.

### GOLD CHLORIDE.

### HYDROQUINONE.

### DR. BYK'S PERMANENT HYDRO-

### QUINONE.

Light yellow crystals. Insensible to moist air and light.

### IODIFORM CRYSTALS.

### POTASH BROMIDE CRYST.

### POTASH IODIDE CRYST.

### POTASH PERMANGANATE CRYST.

### RENNET POWDER.

### SODIUM BROMIDE.

### SODIUM BENZOATE.

### SODIUM IODIDE.

R. W. GREEFF & CO. are also Manufacturers' Agents for the following Specialities:—

### IRON REDUCED BY HYDROGEN.

### ACETANILID.

### ACETIC ACID, GLACIAL & P.B.

### ACETONE, PURE, 98°

### GLYCERINE, 1,260 d.d., &c.

(BEST GERMAN BRANDS).

### CASTOR OIL (FRENCH).

### MAGNESIA, CARB. AND CALC.

### SODA HYPOSULPHITE.

### SUGAR OF MILK.

### ANILINE COLOURS

(CELEBRATED BERLIN BRANDS).

SOLE WHOLESALE AGENTS:

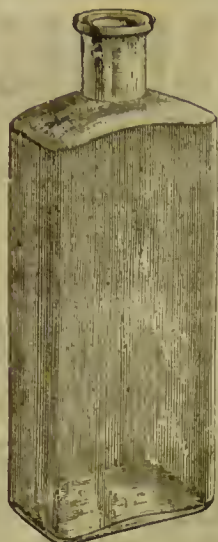
# R. W. GREEFF & CO.,

29 MINCHING LANE,

# LONDON, E.C.



Rd. No. 118583.



1	1½	2	3	4	6	8	10	12	16	20 oz.	
10/0	10/0	10/0	11/6	11/6	12/9	12/9	20/6	20/6	23/6	30/0	Green, per grs.
10/9	10/9	11/6	12/6	13/0	15/6	15/6	24/0	24/0	27/0	34/6	White, „

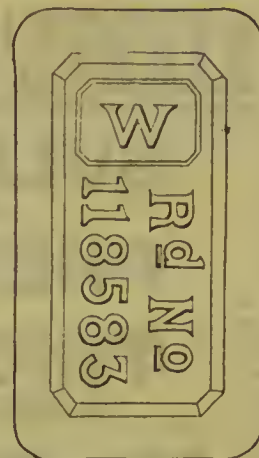
Not less than 1 gross of a size.

1	1½	2	3	4	6	8	10	12	16	20 oz.
9/8	9/6	9/6	10/9	10/9	11/9	11/9	19/0	19/0	21/6	27/0 Green, per grs.
10/3	10/3	11/0	12/0	12/6	14/9	14/9	23/0	23/0	26/0	33/6 White, „

CRATES AND CARRIAGE FREE.

**Casks for EXPORT are charged, but delivered F.O.B.**

NAME PLATES EXTRA, AT USUAL RATES.



FACSIMILE OF  
BOTTOM OF BOTTLE.

This Bottle is made with rounded corners without altering its flat surfaces, which not only adds to its appearance but reduces breakage to a minimum, *ensuring accurate capacity, simplifying labelling*, and producing a perfect appearance when wrapped.

ANY OF THE ABOVE BOTTLES ARE SUPPLIED WITH FLAT, GLOBE, OR CUT GLOBE STOPPERS.

ALSO MADE IN ACTINIC GREEN AND AMBER, SUITABLE FOR SPECIALITIES.

SPECIAL REDUCED PRICES OF  
**EARTHENWARE BED PANS.**



Fig. 31.

GILBERTSONS' NEW AND IMPROVED.

10-inch, 2/9 each	..	with cover, 3/6
11-inch, 3/3 "	..	" 4/-
12-inch, 3/9 "	..	" 4/6

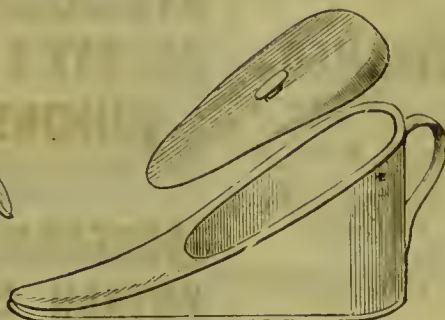


Fig. 33.

SLIPPER.

10-inch, 3/- each	..	with cover, 3/9
11-inch, 3/6 "	..	" 4/6
12-inch, 4/- "	..	" 5/-

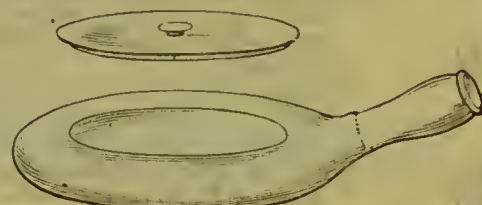


Fig. 32.

115. 52.  
ROUND.

10-inch, 2/9 each	..	with cover, 3/6
11-inch, 3/- "	..	" 3/9
12-inch, 3/6 "	..	" 4/3

## INHALERS.

GILBERTSON'S "PERFECT" .. .. .	.. .. .	per dozen	18/-
" GLASS, with Boxwood mounts .. .. .	.. .. .	4-oz., 10/6 per dozen : 8 oz., 12/- per dozen ; 12-oz., 14/6 per dozen.	
EARTHENWARE (NELSON'S), Marbled .. .. .	.. .. .	per dozen, 32/-	Plain .. .. .
BULLOCK'S ECLECTIC .. .. .	.. .. .	each, 13/-	per dozen 21/-
" UNIVERSAL .. .. .	.. .. .	each, 1/6 to 5/6	
GODFREY & COOKE'S CHLORIDE OF AMMONIUM.. .. .	.. .. .	each, 5/-	
MARTINDALE'S PORTABLE .. .. .	.. .. .	" 4/-	
	.. .. .	" 2/8	

## SPRAY PRODUCERS.

COCAINE, No. 1, Nickel-plated mounts, accurate adjustment, double bellows	..	..	..	..	..	..	each,	3/-
" " 2, " " " extra long nozzle	..	..	..	..	..	..	"	3/6
" " 3, " " " with single ball	..	..	..	..	..	..	"	3/6
" Vulcanite mounts, two bottles, double nozzle, and double bellows	..	..	..	..	..	..	"	2/-
" " " " extra quality, in superior portable leather cases	..	..	..	..	..	..	"	3/9
VULOANITE, for the Throat, Mouth, &c.	..	..	..	..	..	18 -, 24/-,	36/- per dozen.	
" " " double nozzle	..	..	..	..	..	..	48/-	"
" " with upright curved nasal nozzle	..	..	..	..	..	..	36/-	"

*SPECIAL QUOTATIONS TO SHIPPERS AND THE WHOLESALE TRADE.*

**11 ST. ANDREW'S STREET, HOLBORN CIRCUS, LONDON.**



# WYLEYS & CO.

## MANUFACTURING CHEMISTS

AND

## DRUG GRINDERS.

WAREHOUSES, LABORATORIES, AND DRUG MILLS,  
**COVENTRY.**

### GELATINE COATED OVAL PILLS.

*For Stock Sorts, Testimonials, &c.,  
see our "Prices Current."  
For Private Formulæ write for  
Estimates.*

### COMPRESSED PELLETS.

We manufacture all varieties, and issue the same in bulk, or put up in metallic boxes or screw-capped bottles, with descriptive labels.

**EXTRACT of Malt.**

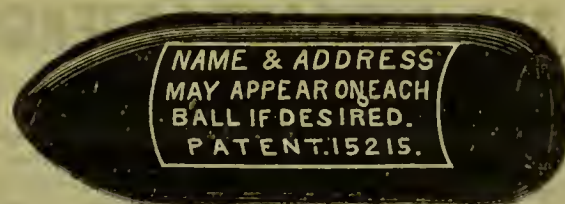
**EXTRACT of Malt and Cod Liver Oil.**

**EXTRACT of Malt, Cod Liver Oil,  
and Hypophosphites.**

In bulk, or in amber bottles in cardboard cases for retail.

### THE DURAPLASTIC COATED HORSE BALL.

(PATENTED.)



"The obvious superiority of these balls over the old paper-wrapped articles will impress the most stolidly conservative of farmers."—*The Chemist and Druggist*.

No. 4.—Alterative Balls	...	...	24/	per gross.
" 5.—Astringent Balls	...	...	24/	"
" 12.—Condition Balls	...	...	24/	"
" 6.—Cordial Balls	...	...	24/	"
" 7.—Cough Balls	...	...	24/	"
" 16.—Cough Balls	...	...	27/	"
" 17.—Cough Balls	...	...	27/	"
" 8.—Diuretic Balls	...	...	24/	"
" 9.—Fever Balls...	...	...	24/	"
" 1.—Physic Balls	...	...	24/	"
" 2.—Physic Balls	...	...	30/	"
" 3.—Physic Balls	...	...	36/	"
" 18.—Physic Balls	...	...	42/	"
" 19.—Physic Balls	...	...	48/	"
" 15.—Stimulating Balls	...	...	24/	"
" 10.—Tonic Balls...	...	...	24/	"
" 11.—Tonic Balls...	...	...	20/	"
" 13.—Worm Balls	...	...	30/	"
" 14.—Worm Balls	...	...	60/	"

#### PRIVATE FORMULÆ.

WYLEYS & CO. will be glad to prepare Patent Duraplastic Balls from private recipes.



# SALICYLIC ACID

## PHYSIOLOGICALLY PURE.

MANUFACTURED BY

DR. F. VON HEYDEN'S NACHFOLGER, DRESDEN.

For Samples and Prices apply to

**BURGOYNE, BURBIDGES & CO.**  
12 and 16 COLEMAN STREET, LONDON, E.C.

All  
Wholesale  
Houses.

**PETER MÖLLERS**

43  
SNOW HILL,  
E.C.

LONDON, CHRISTIANIA, STAMSUND, AND SYLTEFJORD.

### RANDALL'S BLACK CURRANT LOZENGES

Plain Black Currant, old square 2/6    Black Currant Voice (warm  
Plain Black Currant, rough oval 2/6    astringent) .. .. . 3/  
Black Currant and Ipecacuanha 2/6    Black Currant Cough Lozenges\* 3/6  
Black Currant and Tannin .. 3/    \*Ipecac. & Morph., strength as "B.P."  
In Bottles, 1-lb., 2-lb., 4-lb., and 7-lb. For Exportation, in Soldered Tins,  
of any size. From EDWARDS, London, or SANGER & SONS; through any  
Wholesale House; and from the Manufacturers,

**RANDALL & SON, SOUTHAMPTON,**  
Who will forward Samples by post on application.

Also Brown Cough Lozenges, 2/; 7 lbs. stamped with name free, and  
Musk Lozenges (Special), 2/6.

*N.B.—Medical Lozenges of every kind, including those of the Pharmacopœia  
of the Hospital for Diseases of the Throat, London, made with Black or  
Red Currant.*

### EADE'S

CELEBRATED

### GOUT

AND RHEUMATIC

### PILLS.

THE SAFEST and MOST  
EFFECTUAL CURE for

Gout,  
Rheumatism,  
Rheumatic Gout,  
Lumbago,  
Pains in the Head  
Face, and Limbs, &c.

They require neither confinement nor  
alteration of diet, and in no case can their  
effect be injurious.

Prepared only by **GEORGE EADE**,  
72 Goswell Road, London, and sold by  
all Chemists, in bottles, 1s. 1½d.; three  
in one, 2s. 9d.

# BARRON, HARVEYS & CO.

GILTSPUR STREET, LONDON, E.C.

Beg to inform their friends and the Trade generally that, having  
purchased the Business of

**BARRON, SQUIRE & CO., BUSH LANE,**

and also the various Formulæ of the Special Preparations of

**JAMES BASS & SONS, HATTON GARDEN,**

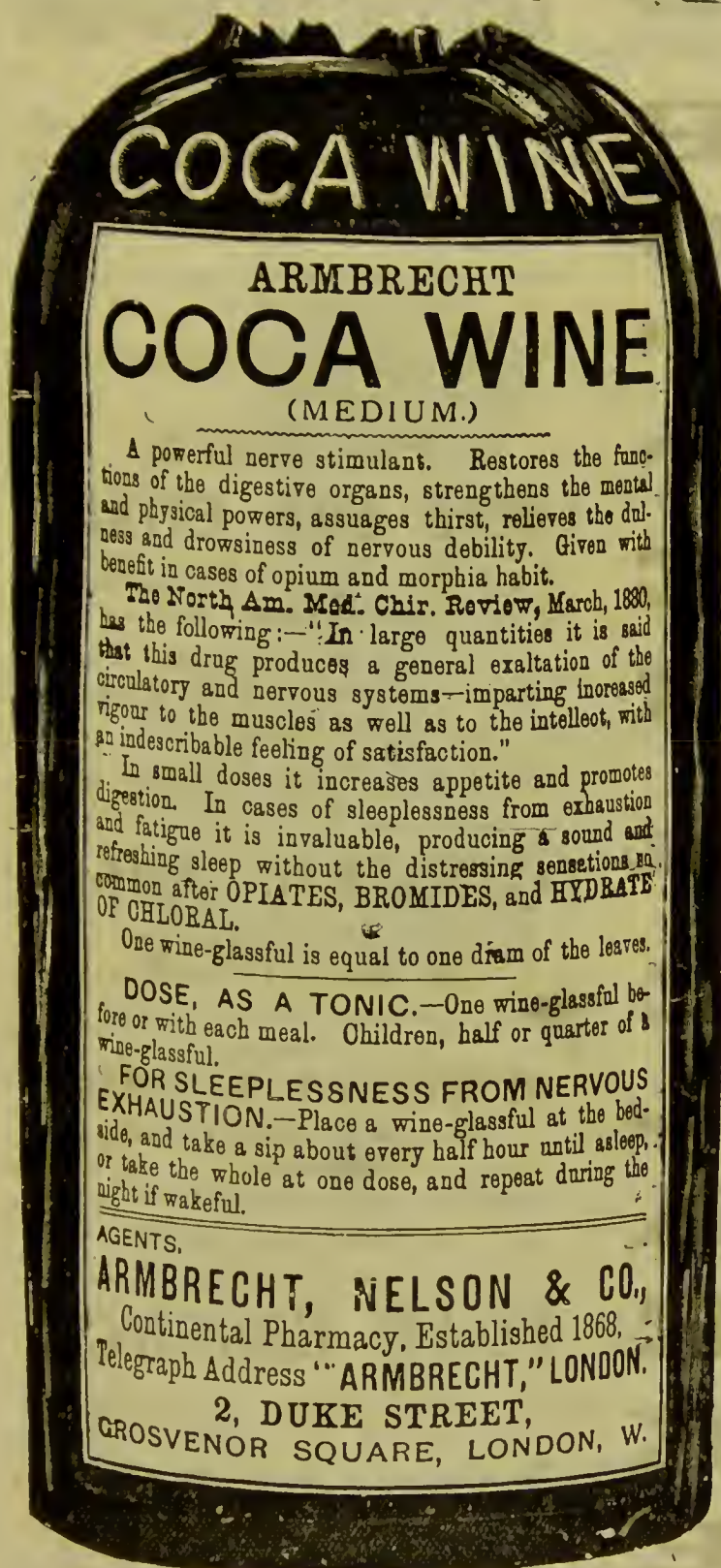
they are prepared to execute orders for the same, and pledge them-  
selves to supply them in all their integrity.

*Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration,*



# ARMBRECHT COCA WINE.

[This Illustration represents the EXACT SIZE  
of the 4s. 6d. Bottle]



4/6  
A BOTTLE



48/-  
PER DOZ.

"Several preparations of Coca Wine have been placed before the public, but we unhesitatingly accord to the above the first place. Their Coca Wine is more suited to the English palate than some of the continental preparations, which are too sweet to be palatable, and which destroy their otherwise tonic and invigorating qualities by deranging the digestive system or creating nausea. The value of Coca Wine in conditions of debility is too well recognised to require comment, and we need do no more than say that after a very careful trial of Messrs. ARMBRECHT, NELSON & Co.'s Wine we can speak most highly of it as a sound and invigorating tonic, and can recommend it most unhesitatingly."—*Journal of Laryngology and Rhinology.*

TRADE DISCOUNT, 25 PER CENT.

Handbills, Show Cards, &c., Free on Application.

**ARMBRECHT, NELSON & CO.**  
2, 3 & 4 DUKE STREET, GROSVENOR SQUARE, LONDON.



## SPECIAL PREPARATIONS.

### LIQ. KAVA KAVA CO.

A Fluid Extract of Kava Kava, Hydrastis, Uva Ursi, &c., for Gonorrhœa, Gleet, Leucorrhœa, and affections of the urinary organs.

CHARACTERISTICS.—Pleasant taste. No smell. It increases the appetite and assists digestion.

Supersedes Copaibæ Preparations.

Price 4s. 6d. per lb.; W. qt. 4s. 3d. per lb.

### COMPOSITION ESSENCE.

Our preparation is one of the oldest, and, being of full medicinal strength, may be relied upon to give satisfaction.

Price 1s. per lb.; W. qt. 11d. per lb.

In 1s. bottles, fancy labels, 6s. per doz.; 6d. bottles, 3s. 6d. per doz.

Export strength, 1s. 6d. per lb.; W. qt. 1s. 4d. per lb.

### THE "DATURA" ASTHMA CURE.

For the Relief of Asthma, Bronchitis, Whooping Cough, &c., &c.

This is a compound for Inhaling purposes. In the severe paroxysms of Asthma it will be found specially valuable, affording relief when all other remedies fail.

1s. Tins, 7s. per dozen; in Bulk, 2s. 6d. per lb.

### DISTILLED EXTRACT OF WITCH HAZEL

(AQUA HAMAMELIS).

For Bleeding of the Lungs, Piles, Bruises, Burns, Sunburn, Stings, Cuts, Varicose Veins, &c.

In America there is no more popular medicine than this article, and in England it has a large sale under various proprietary names.

1s. bottles, 7s. per doz.; in bulk, 1s. 6d. per lb.

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## SPECIAL PREPARATIONS.

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OR

### ANTISYPHILITIC COMPOUND

(McDADE'S FORMULA).

A Fluid Extract of Smilax Sarsaparilla, Stillingia Sylvatica, Lappa Minor, Phytolacca Decandra, and Xanthoxylum fraxineum.

Reputed the most reliable vegetable alterative manufactured.

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For making a splendid Non-intoxicating Ale or Botanic Beer.

Each tablespoonful makes a gallon of beer. Is now in use in nearly every part of the world, and gives every satisfaction.

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For the immediate production of a delicious and stimulating

### TEMPERANCE BEVERAGE.

The Drink for Evening Parties, &c.

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For giving a creamy and lasting head to all brewed and aerated beverages. Two drachms of the essence is sufficient for 1 gallon of beer.

Price 1s. 6d. per lb.; W. qt. 1s. 4d. per lb.

WHOLESALE BOTANIC DRUGGISTS, [1]  
5, 6 & 7 RAVEN ROW, ARTILLERY LANE, LONDON, E.



# THE CARBOLIC SMOKE BALL

WILL POSITIVELY CURE—

FOR INHALATION ONLY.



COLDS  
COLDS in the HEAD  
COLDS on the CHEST  
CATARRH  
ASTHMA  
BRONCHITIS  
HOARSENESS  
LOSS of VOICE  
INFLUENZA  
HAY FEVER  
NEURALGIA  
THROAT DEAFNESS  
CROUP  
HEADACHE  
WHOOPIING COUGH

*As all the Diseases mentioned proceed from one cause, they can therefore be cured by one remedy—namely, the CARBOLIC SMOKE BALL.*

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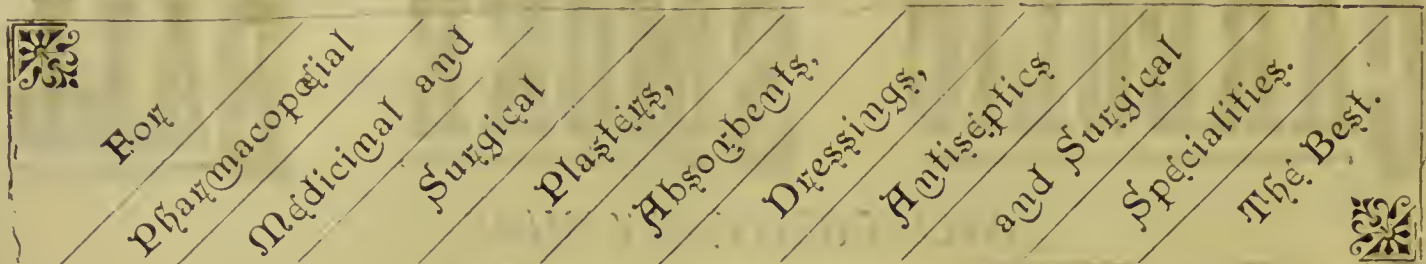
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In SCARLET, WHITE, PINE, & NATURAL FELT. In CHAMOIS LEATHER and FLANNEL, and in PINE FELT LINED WITH PERFORATED CHAMOIS.

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**CAPSICUM** is highly recommended in *The Lancet* by Sir J— S—, M.D., and Dr. H — J — B — for the treatment of Rheumatism, Neuralgia, Bronebitis, &c.



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Obtainable at these Prices from every Wholesale House—

SIZES	0	1	2	3	4	5	6
PROTECTORS, SINGLE ...	6 -	7 6	9 6	12 6	15 6	18 6	21 6
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The above Articles specially recommended by E. J. Gibson Berkley, L.R.C.P.,  
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Beware of vile Frauds being called similar to the above: they are created to deceive,  
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The "EUREKA" PROTECTORS are made from the Bark  
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Chemists will do well to write for our LIST OF WINTER REQUISITES before ordering elsewhere. Attention is also called to a SPECIAL LIST of Cotton Wool, Lint, Corks, Teats, Twines, &c. Now in the Press, List of Useful and Fancy Goods suitable for CHRISTMAS and NEW YEAR'S PRESENTS. These, together with WHOLESALE CATALOGUE, AND ADDENDA sent free upon application.

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## KEARSLEY'S Widow Welch's FEMALE PILLS.

*These are universally acknowledged to be the Genuine, and Druggists may safely recommend them.*

### CAUTION!

The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for Widow Welch's Female Pills has been prepared by them for 100 Years! Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

*Price 27s. per Dozen, subject to usual Discount. Special Quotations to Shippers and for large quantities on application to*

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GOLD MEDAL AWARDED, EDINBURGH INTERNATIONAL EXHIBITION, 1890

No BATH ROOM or CARRIAGE is fully Equipped without

## RANKIN'S CORK MATS

Recommended  
by  
Medical Men.

HEAT  
COMFORT.

Warm, Soft, and Dry, Easily Washed, Clean, and Durable.

They Prevent Chills in Bathing, and keep the feet warm and comfortable.

Mr. GLADSTONE pronounces them to be *very useful*, and Lord SALISBURY and many of the Nobility and Gentry now use and appreciate them. They prevent cold feet in Driving, in Church, in the Counting-house, in Stone-floored Apartments. Numerous testimonials to their usefulness in a great variety of ways.

Sizes: 1 ft. square to 20x45 in. Prices: 3/1, 5/1, 7/6, and 10/6 each. Special Mats up to 21/ each. Of all leading Chemists and Furnishing Houses.

CAUTION.—Each Genuine Mat branded "Rankin's Cork Mat."

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## FLOOR WAX (AMERICAN),

For Halls, Ball-Rooms, &c.; does not soil the garments; easily and quickly applied. Put up in 1-lb. packages, price 2/- per lb.

FOR SALE IN ENGLAND BY

**WYLEYS & CO., COVENTRY.**





Above represents two Chemists, Mr. Shortsight and Mr. Wideawake, the former being a type of those who will not move with the times, and fail to take advantage of chances offered them of increasing their trade, forgetting that times have changed, and that chemists must meet the public demand for novelty and attraction. Mr. Wideawake is wiser—he sees that the people must be attracted, and that to draw them to his shop, he must have something different from and better than his neighbours, and that novelty is the feature of the day. Another important point to remember is, that what you show in your window are articles of everyday use, suited to the season, and of first class manufacture. Now, why does Mr. Wideawake, in above instance, draw a crowd to his pharmacy? Simply because he has something in his window to attract the eye. The figure you see in the illustration is

## SHIRLEY'S NEW CHINA SHOW FIGURE OF "JUSTICE"

Telling the public that the **"A I" BRAND MENTHOL CONES** far excels all others for Neuralgia, Headache, Rheumatism, &c., Shirley's Brand being admittedly the best, and having secured at Edinboro' Exhibition the Only Medal Awarded for these goods. Why do you read this advertisement? Because there is something to attract your eye. The same with the public; therefore by having an assortment of these Cones, and showing this charming figure, *Hundreds must be attracted to your shop who would otherwise pass by without entering.*

This charming White and Gold Figure is Given Away with a 40/- order, and special parcels have been arranged to suit all classes of trade, as under:—

**PARCEL A.**—All in PLAIN boxwood cases: 5½ doz. 6d.; 3 doz. 1s.; 2 doz. 4d.; realising when sold, 77s. = 37s. on an outlay of 40s. = 92 per cent. profit.

**PARCEL C.**—PLAIN Boxwood and other styles, assorted: 4 doz. 6d.; 2 doz. 4d.; 2 doz. 4½d.; and 3 doz. 1s.; realising when sold, 77s. = 37s. on an outlay of 40s. = 92 per cent. profit.

**PARCEL E.**—Printed Boxwood, only to sell at 4d. and 6d. each: 4 doz. 4d. and 9 doz. 6d.; realising 70s. = 30s. on an outlay of 40s. = 75 per cent. profit.

**PARCEL G.**—Printed Boxwoods and others, to retail from 1s. each: 5 doz. 1s., 1 doz. 1s. 6d.; realising 78s. = 38s. on an outlay of 40s. = 95 per cent. profit.

**PARCEL I.**—Menthol Cones and other preparations of Menthol, embracing 3½ doz. 6d., 2 doz. 4½d., 1 doz. 1s., and 1 doz. 4d. Cones, 1 doz. Menthol Cocaine Toothache Tubes, 1 doz. 7½d. Menthol Ointment, 1 doz. 3d. Menthol Snuff, and 1 doz. packets of Menthol Leaves, realising when sold, 68s. 6d. = 28s. on an outlay of 40s. = 70 per cent. profit.

N.B.—If above parcels are not suitable, Chemists can make up their own assortments.



**PARCEL B.**—All in PRINTED Boxwood Cases: 5 doz. 6d.; 3 doz. 1s.; 2 doz. 4d.; realising when sold 74s. = 34s. on an outlay of 40s. = 85 per cent. profit.

**PARCEL D.**—PRINTED Boxwood and other patterns, assorted: 4½ doz. 6d.; 3 doz. 1s.; 1 doz. 4d.; 1 doz. 3½d.; 1 doz. 4½d.; realising when sold, 75s. = 35s. on an outlay of 40s. = 87 per cent. profit.

**PARCEL F.**—Plain Boxwoods and other patterns, to retail from 2d. to 6d. each: 6 doz. 2d.; 4 doz. 3d.; 1 doz. 3½d.; 3 doz. 4d.; 1 doz. 4½d.; 4 doz. 6d.; realising 68s. = 28s. on an outlay of 40s. = 70 per cent. profit.

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This old-established and increasingly favourite Dentifrice has been over Sixty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate. The original and only genuine is manufactured solely by

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The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address cards and directions for enclosure.

**AMERICAN****"CRÈME" TOOTH PASTE.**

Vast is the difference between a "Crème" Tooth Paste and a Tooth Paste. Americans have used the above for 15 years. It is the only "Crème" Tooth Paste sold in England. It cleanses the Teeth, perfumes the Breath, and removes Tartar.

**CHINA JARS, 2/- SILVER TUBES, 1/-**

The beautiful way in which the "Crème" Tooth Paste is "got up" alone secures its sale. There is not another preparation in the United Kingdom which is turned out so well. Show Cards and Circulars with all orders of 1 Dozen upwards.

**SPECIAL OFFER TO AGENTS.**

With every dozen full-sized Tubes or Jars ordered in first order, we will give 1 dozen Sample Tubes or Jars. The samples are 1/4-size facsimiles. Write for Special Terms and Samples.

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43 Highest Awards over all Competitors throughout the World.

**SEABURY & JOHNSON,**

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**PLASTERS**

IN RUBBER COMBINATION.

Antiseptic Dressings and Absorbents, Bandages, Oiled Silk and Muslin, and Surgical Dressings of every description.

Supplies may be obtained through any Wholesale Druggists and Dealers in Surgical Appliances, or from the Proprietors,

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**MRS. E. FILCE'S**

**OINTMENT.**

None genuine without bearing the registered trade mark.

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**Sole Proprietress—Mrs. E. FILCE.**

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Tubes, 3s. each; Half Tubes, 1s. each. Pomade in vials, 5s. HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Laccet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank) with orders, payable to

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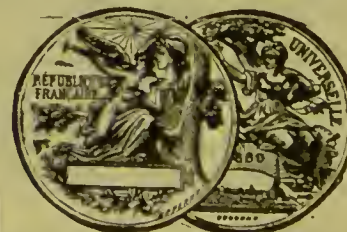
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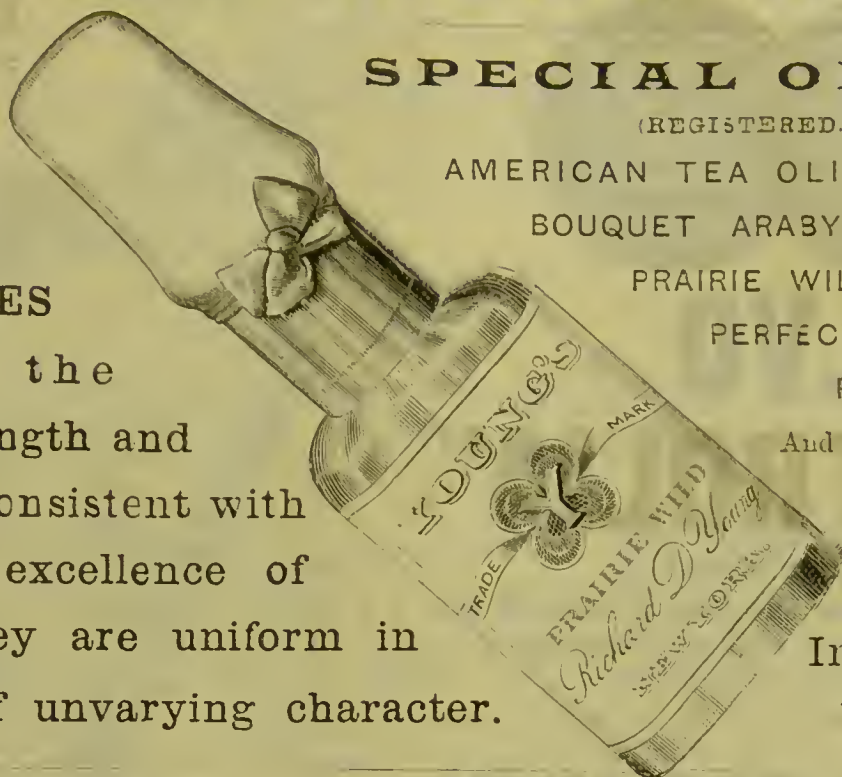
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YOUNG'S

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combine the  
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METAL BOTTLE CAPS  
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SCREWED BOTTLES.

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Absolutely Genuine Paraffinum Molle of the very Purest Form, and we claim that it is superior to Vaseline.

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Universally adopted by the Medical Profession  
FOR

OPHTHALMIA, SCURVY, RINGWORM,  
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FOR

EXTERNAL & INTERNAL IRRITATION  
OF EVERY KIND.

PACKED IN CASES—

One Doz. 1s. 6d. Bottles; One Doz. 2s. 6d. Bottles  
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TESTIMONIALS MAY BE HAD UPON APPLICATION.

# "EDIBLE SALVO PETROLIA"

For Public Speakers, Actors, & Singers.  
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Matchless for the  
Teeth, Gums, and Breath!

Guaranteed Non-  
injurious to the  
Enamel.

Of all  
Wholesale  
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Prices:

1/3 size 9/-

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Show Cards, &c.,  
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Floral Extract, 3/6, 5/-,  
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Egg Yulep, 2/-, 4/-.  
CONCENTRATED

Egg Yulep, 2/6,  
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Golden Fluid,  
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EUXURON,  
1/6.  
&c.

Stimulating Lotion, 5/-,  
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Astringent and Tonic  
Lotion, 5/-, 10/6.

Quinine and Arnica  
Hair Wash, 3/6,  
5/-, 10/6, 21/-.

Arnica Wash  
3/6, 5/-,  
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**EUCHRISMA.**  
Combines in one clear Fluid every valuable  
Component both of a Hair Grease and Wash,  
3/6, 5/-, 10/6, 21/-.

An elegant Preparation for  
the Hair and Beard.  
Price 2/6, 3/6, 5/-, 10/6, 21/-.

**EAU RACINE.**  
For renewing the original colour of Grey Hair,  
superior to all other Restorers, being perfectly  
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PRICE ONE SHILLING.

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**"The Scent of the Hayfields"**

Being very attractively got up, these Perfumes are the best to stock for Christmas trade.

**ARTISTIC**  
Advertisements given liberally with first orders.

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Price Lists free.

Order through your Wholesale House, or direct from  
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This old-established and celebrated preparation for the Teeth is attractively put up in the form of Liquid, Powder, and Paste, is now being largely advertised to the public.



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**EAU DE BOTOT**  
IS THE ONLY DENTIFRICE APPROVED  
By the Academy of Medicine of Paris.

	Size	Size	Size
EAU de BOTOT	1/6, 11/9;	2/6, 20/;	5/ 32/9 doz
POWDER	1/ 8/6;	2/6, 17/	doz.
PASTE	1/ 8/6;	2/6, 17/	"

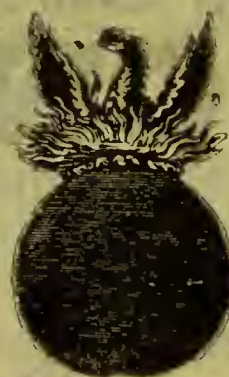
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SAMPLE BOXES,  
Containing  
Powder, Paste, & Liquid,  
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N.B.—See each Article  
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**PAINTS & COLOURS** OF ALL KINDS.

**MIXED PAINTS READY FOR USE,**  
In Tins, 1, 2, 4, 7, and 14 lbs. each.

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Of all kinds for Coachbuilders, Decorators, &c.  
OIL BOILERS, REFINERS, & MERCHANT  
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Flint Glass Bottle Works,  
**THE OVAL, CAMBRIDGE HEATH, LONDON, E.**  
**THE HEART SCENT BOTTLE (Reg.), for Salts or Perfume.**

Is most admirably adapted for pocket use, combining great beauty of design with the maximum of convenience.

Price, Plain or Fluted (in 5 GROSS lots) :—12/6 per gross. Assorted WHITE and COLOURED.  
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**METAL SCREW-CAPPED LIMES**, in White Flint, Actinic Green, or Amber.  
The Best Bottle for Glycerine or Pills. Prices : 1 oz. 13/6, 2 oz. 15/6, 3 oz. 18/6, &c. per gross.

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered.

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[3]

## DISPENSING BOTTLES & PHIALS

SPECIAL PACKAGE NOW READY,  
containing

2 Gross 8-oz. Bottles	..	..	..	..	s.	d.
2 " 8-oz. "	..	..	..	..	16	0
2 " 4-oz. "	..	..	..	..	16	0
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All other kinds and sizes equally low. Please write for prices of any size required.

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## 'RAPID' SIFTER & MIXER



Reduces lumpy powders,  
sifts and mixes faster  
and makes a more perfect  
blend than any Machine  
in the Market.

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FOR HAND OR POWER.

Capacities, from 15 to 300 lbs. at one mixing.

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Cannot open by accident.  
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Is practically air-tight:—Is used  
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Dispenses with string, bags, and  
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Saves 19 minutes out of 20.

**OVER 300,000 SOLD.**

SAVING THEIR OWN COST.

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## WAREHOUSE AND SHOW ROOM,

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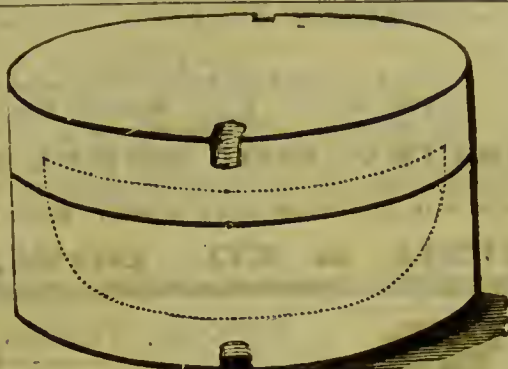
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#### IMPROVED PATENT

## EARTHENWARE COVERED POTS

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These Pots are beautifully glazed and finished, and, being very light, are specially adapted for sending by post.

#### ORDINARY THICKNESS—

1 dr.	2 dr.	$\frac{1}{2}$	$\frac{1}{4}$	1	$1\frac{1}{2}$	2	3	4	6	ounces.
1 6	1 6	1 6	1 8	1 10	2/	2 3	2 10	3 6	4 6	5 6 per doz.

#### THIN FOR DISPENSING—

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$	$1\frac{1}{2}$	2	3	4	6	8	ounces.
1 7	1 9	2/	2 2	2 5	3/	4/	5/	6/	per doz.

# THE LACTOTHERME

## (REGISTERED TRADE MARK) OR

## INFANTS' PORTABLE MILK STOVE,

Patented in England and Abroad.

### ADVANTAGES.

The Lactotherme heats milk exactly to the proper temperature at which it should be given to Infants, viz., 98 degrees Fahrenheit, this being the temperature of the milk from the mother's breast.

The Lactotherme does not cause the milk to turn sour.

The Lactotherme greatly benefits the health of Infants, as by giving food at a proper temperature, Colic, Diarrhoea, and Convulsions are guarded against.

The Lactotherme is portable, and may be as effectively used in a Railway Carriage as in the Nursery.

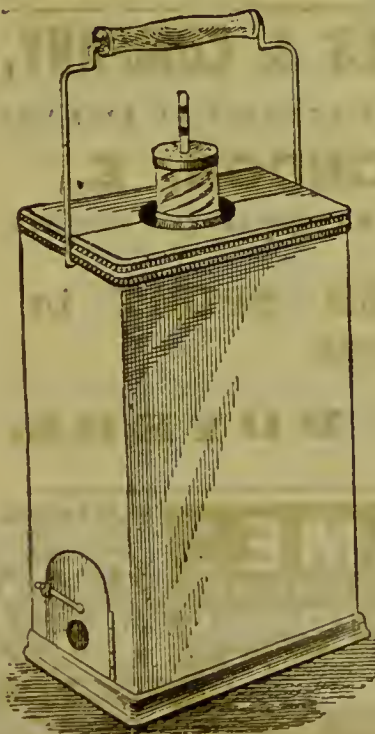
The Lactotherme will be also found a boon to Invalids for keeping warm Beef Tea, &c., during the night.

The Lactotherme is safe, cleanly, and effective, and burns without smell.

### WHOLESALE PRICES.

No. 1. Japanned Iron, 6/- each. No. 2. Polished Brass, 8/6 each.  
No. 3. Nickel Plated, 10/- each.

Each Apparatus is furnished complete with Thermometer, Box of Prepared Carbon, Box of Wicks, and Float.



### TOOGOOD'S PATENT BRONCHITIS AIR KETTLE,

51/- per dozen.

SOLE AGENT FOR DR. LEE'S STEAM DRAFT INHALERS.



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Guy's Tonic is sold Retail at 2s. 9d. per bottle. One size only prepared. We are co-operating with Chemists and the trade generally, arranging satisfactory terms in return for general enterprise on our behalf.

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We wish to draw the attention of Chemists to the excellence of the spirit we supply for pharmaceutical purposes. We have devoted great care and attention to this branch and have made it a leading line. That our efforts in this direction have been appreciated is proved by the number of unsolicited testimonials we have received from nearly every town in the country, of which the following is a specimen:—

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Please send 5 gall. 56 o.p. as before. I have pleasure in saying I have always found your spirit answer all tests, which is more than I can say of all I have had from different places, and also to be practically free from odour.

Messrs. Stephen Smith & Co.

The Pharmacy, Morecambe.

Yours faithfully, JOSH. N. CUTTS, B.Sc., F.C.S.

In consequence of the increase in the spirit duty our prices will be—

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CASH WITH ORDER.

REDUCTIONS FOR QUANTITIES.

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Jars, 2-gallon, 2/8; 3-gallon, 3/; 4-gallon, 4/.  
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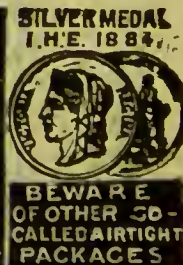
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In 2-lb. cakes, in cases of about 130 lbs.

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In round cakes in 2-lb. parcels, or in oblong cakes, loose } in cases of 54 lbs.  
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Plain blocks of 7 1/2 lbs. in cases of 250 lbs.

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Plain round cakes in 2-lb. parcels in cases of 72 lbs.

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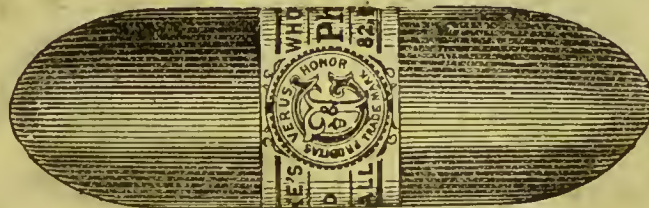
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CARBOLIC & GLYCERINE SOAP in 1/4 lb. TABS

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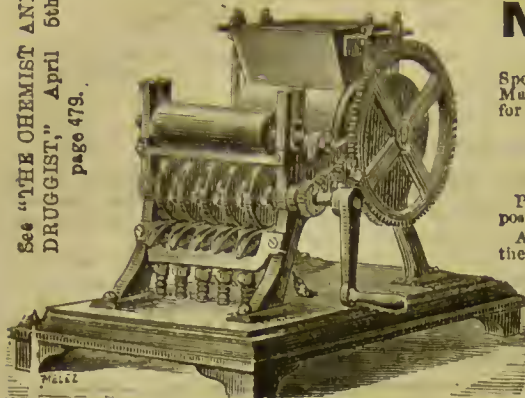
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See "THE CHEMIST AND DRUGGIST," April 5th, page 478.



## NEW PATENT AIR-TIGHT CHEMIST JAR.

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INVALUABLE FOR SHOW BOTTLES, CHEMISTS, CONFECTIONERS, &c.

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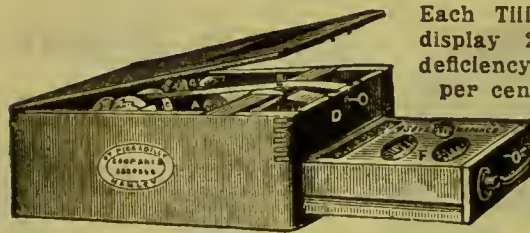


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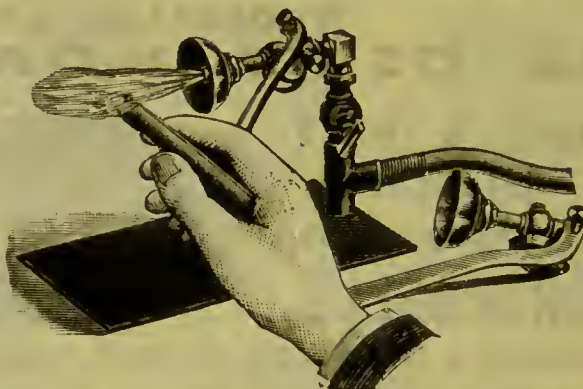
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